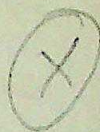


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New Delhi

Editor

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(Sd.)
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Anthropology

RAM SWAROOP DIXIT : MARKET CENTRES AND THEIR SPATIAL DEVELOPMENT IN THE UMLAND OF KANPUR, University of Allahabad, 1980, *Supervisor* : L.R. Singh.

The Problem

KANPUR, THE only metropolis of Uttar Pradesh and one of the most important industrial and trade centres of north India, has a lion's share of the population engaged in trade and commerce in the state. Moreover, the Umland of Kanpur is essentially dominated by the primary economic activities, mainly agriculture.

The objective of the work is, primarily, to present a detailed analysis of the spatial development of market centres (1971) of the study region at the tahsil level. More specifically, the study aims at investigating the spatial distribution, accessibility, connectivity, typology, and organization of market centres. It also enquires into the problems, prospects, and planning perspectives of market centres and the market mechanism.

Methodology

The treatise is based on both empirical and theoretical approaches; various perspectives of market centres. For critical analysis, various techniques like: gravity models, lorenz curve, nearest neighbour analysis, correlation and regression analysis, network analysis, rank size relationship, primacy and centrality indices, and the chi-square test, have been used.

Findings

After the exercise of drawing as many as nine junctional zones, the medium umland of Kanpur has been delimited. Following the study of typology, it has been concluded that for all practical purposes the second order umland, the secondary umland, of Kanpur can be treated as the real umland of the Metropolis. It comprises the districts of Unnao, Farrukhabad, Etawah, Kanpur, Fatehpur, Jalaun, Hamirpur, and Banda (excluding Karwi and Mau tahsils) of Uttar Pradesh with an areal coverage of 39,924 km². The region has two clearcut subdivisions: the Ganga Plain (consisting of first five districts), and the Bundelkhand (consisting of the rest three districts).

There are two general theories about the genesis of market centres: the orthodox theory, and the alternative theory. In the beginning, the marketing activities started in the region in accordance with the first theory. The unorthodox theory came to have an important say afterward. The number of market centres during various decades of the twentieth century make it clear that the bi-weekly markets dominate the Ganga Plain while the weekly markets predominate the Bundelkhand. The analysis of development perspectives comprising various facets of market centres such as disappearance, emergence, revival, upgrading, and degrading shows that there have been significant variations at the tahsil level.

As regards the spatial distribution of market centres an enquiry into market centres relationships shows that there are 1,638 market centres per 100 km²; 0.647 market centres per 10,000 population; and 6,110 market centres per 100 inhabited villages in the umland. Amongst the hypotheses, tested to explain the distribution of market centres; two hypotheses proved to be the most significant than others: (i) that there is a direct relationship between the number of inhabited villages and the number of market centres, and (ii) that there is a direct relationship between the population number and the number of market centres.

The nearest neighbour analysis evidently shows that the distribution pattern of market centres in 23 tahsils is very near to random while 10 tahsils have near random patterns. In the two subdivisions as well as the entire study area the patterns are very very near to random. There are no cases of the clustered or regular or random-clustered or random - regular patterns.

The road connectivity measured with the help of theoretic measures (such as $\alpha.B.\gamma$) shows much variations between the two subdivisions of the study region. The spatial accessibility of market centres, however, is considerably good.

An exhaustive analysis of the taxonomy of market centres on the basis of various variables such as (i) location of market centres in the settlement type or the type of people it serves, i.e. rural/urban (ii) size of population, i.e. total population/population engaged in trade and commerce/estimated average attendance on a market day, (iii) function and exchange orientation, i.e. retail (horizontal)/retail and wholesale (vertical), (iv) commodity specialization, and (v) periodicity of market centres indicates that (a) there are 630 rural markets and 24 urban markets, (b) big,

medium, and small markets under the both rural and urban classes on the basis of parameters (ii), (iii) and (iv) as given above, and (c) the bi-weekly markets rank first in order of number of market centres followed by the weekly markets.

The ranksize relationship according to Zipf model observes that the rule holds good in the middle part consisting of about 500 market centres of the array of 655 (i.e., including Kanpur Metropolis itself). It does not work in the upper and the lower margins of the array. The deviations at the top and the bottom of the series show that the bigger centres could not keep pace with the premier centre, Kanpur, on the one hand while the smaller centres could not grow steadily to attain their legitimate size on the other. These deviations are because of some divergences from the homogeneous state.

The analysis of the hierarchical nesting of market centres is based on composite/aggregate size of the centres. The aggregate size has been found out on the basis of centrality index which itself is based on various parameters causative to determine the size of market centres. Five hierarchical orders have been noted with the frequencies : 1:8:16:248:382. The trade areas of various orders of market centres have been worked out. The Spatio-temporal analysis, synchronization, of market centres and the related hypothesis tested make it clear that the null hypothesis, set for rejection, stands to be unrejected meaning thereby that the difference between the number of market meetings on various days is not by rule but by chance. The hypothesis; that the periodic markets are synchronized in such a way that there is an inverse, rather than a direct, relationship between the temporal and locational spacing of market centres shows that one tahsil of the Bundelkhand accords with the same, five tahsils are near accord, four tahsils partially accord, and two tahsils totally discard the hypothesis (in the case of Bundelkhand). Also, in the Bundelkhand there are six complete, and fourteen incomplete/overlapping marketing cycles/rings/circuits. Besides, clear market designs/systems/patterns too have been identified.

The existing and rather growing intraregional disparities have defied the balanced development of the study region. Therefore, a step has been taken to analyse the problems, explore the prospects, and work out the development planning strategies. The strategy of development planning ingrained in the present theme is based on exhaustive exercises and in-depth studies. In doing so, the paramount consideration was not to present any scheme in 'fantasy' but to spell out what could really be done *vis-a-vis* existing conditions. To fill in the market gap areas it has been recommended that in every tahsil there should be at least one market centre per 100 km² area/10,000 population/10 inhabited villages. The hierarchical frequencies proposed are 1:7:45:269:539 as against the observed (1:8:16:248:382) and the hypothetical (1:6:42:294:2058) ones. lastly, various steps for improving the marketing mechanisms have also been suggested and it has been emphasized that the market intelligence service and market researches should go ahead for identifying other bottlenecks in the development of market centres and transformation of rural habitat and society.

G.PRAKASH REDDY : CULTURAL ECOLOGY OF AN ISLAND COMMUNITY: A CASE STUDY OF CHOWRA, University of Andhra, 1979, *Supervisor* : D.L. Prasada Rao.

The Problem

In the Nicobar Archipelago, the Chowra Island, though small (2.8 km) occupied an important position from the beginning. The present population of the Island is 1400 and the density of population works out to 500 persons per square kilometre, the highest in both Andaman and Nicobar Islands. Despite these constraints the Island is able to dominate the entire Nicobar group of Islands in the inter-Island trade and is able to sustain its huge population. According to the earlier writers Chowra Islanders have held other Nicobar Islands in thralldom by their reputation in sorcery, witchcraft, and wizardry. It is interesting to examine how such a small Island, with very limited resources and high density of population is able to dominate other Nicobar Islands and sustain its huge population: In the light of these facts the thesis has the following objectives:

1. to examine the pattern of community life in the Island;
2. to find out the adaptive nature of the Island's social structure to the conditions of scarcity and high density of population;
3. to study the economic organization of the Island and its adaptive nature; and,
4. to understand the role of religious and political institutions in acquisition, and regulation of resources.

Methodology

The scholar has relied mostly on conventional type of Anthropological field work, i.e. observation coupled with interviewing. The data collected are more qualitative than quantitative. Only one type of schedule was canvassed for collecting census information from the Island. Both group and individual interviews were also conducted with the help of an interview guide besides the collection of a number of case studies and biographies.

Findings

In spite of high density of population and limited resources, like limited land mass, flora and fauna and raw materials for manufacturing pottery and canoes, the Island is able to sustain itself. This achievement of Chowra is mainly due to its system of adaptation. The Island community adapted to its environment mainly through an

economic use and equitable distribution of internal resources by means of certain institutionalized ways.

It is imperative for the Islanders to conceive themselves as a unit or a single community to avoid competition in sharpening the scarcity of essential resources. Not only the Islanders conceive themselves as a unit, but also make every effort to utilize the available resources for the maximum benefit of all the people in the Island.

The social structure of the Island evolved itself in such an excellent manner that the heads of the descent groups have been made to look after the needs of its members and all the heads of descent groups are further made members of the Island Council, the ultimate authority over the resources and the people in the Island.

Because of the exogamous nature of the *Kunye* (clan) and the endogamy of the Island the entire Island is closely integrated through affinal relationships. The most significant point we observe is the elimination of competition for available resources within the Island and thus foster a sense of unity among the population. This important feature is achieved mainly through the corporate nature of the descent groups. The ownership of garden land in the Island is vested with the *Kunye*s and the members of *Kunye* enjoy only usufructury right over it. *Kunye*s allocate the garden land through their heads *Kavee Kunye*s to its members, only after assessing the needs of each member. Like-wise the ownership of large sea-going outrigger canoes is vested with the *Kunye*s and its use is regulated by *Kavee Kunye*s whereas the *Ringase* (lineage) regulates the use of fishing canoes. Thus the corporate nature of descent groups prevent individual competition for scarce resources, and that each family in the Island is provided with some land for gardening and canoes for inter-Island transport and fishing.

The pivots on which the descent groups revolve are its heads: the *Kavee Kunye*s and the *Kavee Ringase*. It is their responsibility to look after the basic necessities like food and shelter of each and every member of their group.

The descent groups in the Island are so well adapted to conditions of high density of population and scarcity of basic resources that all individuals who are members of the Chowra society are assured of basic necessities of life provided they submerge their individual tendencies and ambitions and work for the welfare of their descent groups in particular and the entire Chowra society in general.

While the descent groups enjoy the right of ownership of garden land and power of allocation to its members, it is *Kaoonse* or 'family' which is the basic unit that exploits the garden land allotted to it.

The family in Chowra is organized so as to achieve effective exploitation of given limited resources resulting in maximum benefit to all its members. The division of labour in Chowra family is quite suitable in achieving the above mentioned goal, i.e. maximum satisfaction to all the members of a family. The division of labour is based on sex and age. While the men engage themselves in difficult tasks and also tasks which take them far away from their houses and from their Island, the women engage themselves in less difficult tasks like attending to gardening and pottery making, which do not require them to move far away from

their houses. This type of division of labour enables them to take charge of their other duties like house keeping and child rearing.

Chowra family acts as an effective institution of socialization. All the adult members in the family share this responsibility of training the children. While the father and his grown up sons train the boys in the men's tasks by taking along with them to economic tasks like fishing, canoe making etc., the mother and her grown up daughters train the younger girls in women's duties like cooking, gardening, pottery making, house keeping etc.

The economic organization of Chowra Island is characterized by prudent and judicious use of scarce resources and proper use of their skills in pottery making, canoe making, construction of beehive type of huts and expertise in gardening.

Land in the Island is put to various uses strictly according to priority. Approximately 60 per cent of the land mass of the Island is under horticulture. The Islanders produce various types of roots, tubers, and fruits like tapioca, taro, sweet potato, banana, and papaya. They also grow a little quantity of sugar-cane and pineapples. The food crops are grown in such a way that some variety or the other is available throughout the year though not in abundance. Among the tree crops coconuts play a very important role, because they are available throughout the year. As mentioned earlier no part of coco palm goes waste and every part of it is utilized for some purpose or the other. The balance between land under gardening and land under forest growth is maintained through the practice of shifting cultivation, and enforcement of strict rules of utilization of the forest by the descent groups and the Island Council.

Another source of food for the Islanders is their pigs and poultry. Pigs and poultry are also important in their socio-religious activities. Pigs are invariably given as part of bride price, its blood is considered as having medicinal qualities, chicken besides providing meat to the Islanders also acts as a medium of exchange to a certain extent. The Islanders exchange chicken at government trading centre in return for items like beedies, cloth, candles etc.

Despite lack of raw material, i.e. clay within the Island, pottery making is the monopoly of Chowra Islanders in Nicobar Archipelago. The Islanders secure their clay from Terrassa Island. All the men of the Island go as a team to secure clay to Terrassa Island. Those families which cannot send their members are helped by their respective *Ringase* and *Kunye*. Securing of clay is the job of men, and manufacturing pottery is the job of women.

Chowra made large sea-going outrigger canoes enjoy good reputation in Nicobar Islands. The Islanders manufacture these even in the absence of raw material, i.e. large tree trunks in the Island. The large canoes are made both for use in the Island as well as for exchange in other Islands.

The Islanders' skill in beehive type of house construction and gardening also play very important role in reinforcing the group solidarity within the Island through mutual exchange of services. The same skills also help them in securing certain economic advantages from other Islands.

Making of pottery, large canoes and other technical skills play very important role in inter-Island reciprocities and through these reciprocities the Islanders fill up gaps in their food supply and in certain types of material equipment.

The distribution of goods mainly takes place through redistribution, reciprocity, and exchange. Redistribution is practised within the Island. Since land and forest resources are centrally controlled and re-allocated according to the needs of the people, they are classified under redistribution. Likewise, food is one of the common and frequent items which is redistributed during socio-religious ceremonies like marriage, death, ancestral worship etc.

Following Sahlins, the reciprocities and exchanges of the Islanders have been divided into (1) generalized reciprocity, (2) balanced reciprocity, and (3) negative reciprocity.

Chowras' traditional religious institutions and the beliefs play very important part in the acquisition of raw materials and in making the finished products.

The religious institution and the beliefs play very important part in the acquisition of raw materials and in marketing the finished products.

The religious ideology and values coupled with the reputation of Chowra Islanders in black art of sorcery, and witchcraft has created a kind of fear psychosis among the Nicobarese of other Islands and the result is they became victims of the exploitation of Chowras. The manufacture of pottery in other Islands is tabooed, because the spirits have decreed through the *Kamasoons* (Religious priests and Medicine men) that only Chowra people are entitled to make pottery, those who transgress this, will be punished by '*IWI*' in the form of sickness or death. Likewise the Islanders secure clay from Terrassa Island. Even a wide market is created for Chowra pots and canoes by applying the same religious sanctions. This clearly shows that what is deficient environmentally is made good by the religious ideology to a great extent. The working of their religious institution reinforces the structural and economic adaptations of the Island and works as a complementary force.

Internally the taboos and religious sanctions keep the people of the Island in harmony with the cosmos, which is very essential. For the Islanders the religious system and the cosmos are not two different things but integrated into one. If any one breaks a taboo he loses his harmony with the cosmos, and is in perpetual danger of losing his life due to sickness, or losing his crops due to natural calamities etc. To regain the lost harmony sacrifices have to be made to the '*IWI*' spirits through *Kamasoons*.

Entrance of Christianity into Chowra Island, has not shattered the system of adaptation. This is due to the practice of 'syncretism' by the Islanders. Though more than half of the population is Christian, the faith has not yet taken deep roots and remains only peripheral. This is because, except the small children all the other converts are first generation Christians that too converted after having imbibed their traditional religion thoroughly. The Christian population of the Island follow Christian rituals and ceremonies without any exception along with non-Christian population. The Christians at the most consider 'Christ' as one amongst their

benevolent spirits. This fact is borne out by the *Kamasoons*' habit of keeping a wooden cross in their *Inthekuis* along with wooden images of 'IWI'

However, it may be said that internally the influence and power of *Kamasoons* over the population is getting reduced because they are forced to share their influence and power in religious activities with the Christian priest.

The present political organization of the Island is an outgrowth of the past system. The main task of the political organization of the Island is to control and regulate the use of internal resources besides being responsible for regulating the behaviour of the people also. The Island Council consisting of the Chief Captains, all the *Kavee Kunyees* and of all the settlement captain is the highest and most powerful body which controls all the internal resources and exercises direction over the activities of the people.

The Council fosters unity in the Island through its activities and organizes the entire Chowra community in its struggle against the environmental constraints. It is the responsibility of the Council to look after the welfare of the Islanders by providing them with basic necessities of life. This responsibility is realized through its control over land and land use. The Council even controls the spread of the habitation area.

The Council also directs the economic activities of the Islanders, it fixes the day for starting the plantation operations and members go round the Island encouraging the people. By this they are making sure that everyone in the Island utilizes the allotted piece of land in time. It organizes and directs the annual expedition to Car Nicobar Island for exchanging their pots and canoes, and a voyage to Terrassa Island for getting pot making clay.

The Council further not only organizes and directs social and religious activities of the Island, but also the Christian activities. Except for the ritual and ceremonial part the Christian priest as well as the *Kamasoons* work under the direction of the Council.

The Island Council is even responsible for the adaptation strategy of the Island.

MAHADEB P. BASU : FIVE MUSLIM GROUPS OF CALCUTTA: A STUDY OF THEIR SOMATIC TYPES AND AFFINITIES, University of Calcutta, 1977, Supervisor : H.K.Rakshit.

The problem

In India, the Muslims constitute the second largest community. Quite a few anthropological studies on them including those of Calcutta show that the community is composed of a number of 'ethnic' groups maintaining rigid social boundaries through the practice of endogamy. Various Muslim groups with varying number

from all over India except Assam and Andhra Pradesh have been living in Calcutta. Numerically, the most important section is from Bihar. These Muslim groups are either converts from the different Hindu caste groups or are direct descendants of the aristocracy of Moghul times. If the Muslims are really the converts from the Hindus then does their physical study support that, keeping in view the notion of equality among them?

Methodology

An answer to this tangled question was sought through the anthropometric study of the variability of somatic types and also by tracing affinity of several Muslim groups residing in Calcutta. A sample of 100 adult normal male individuals from each group and one from each family was surveyed according to Monaco and Geneva Congress agreements. Although there is no agreed list of physical characters which can typify a group but for this present study 9 essential measurements on head and face and also 12 anthroposcopic observations as suggested by Sullivan are included. Apart from these, stature, sitting height, and body weight are also taken. The weight of a person was taken without shoes and with minimum clothing. Individuals of the Sisgar and Raien groups were measured and observed mostly in the morning and the others were generally measured in the afternoon. The age range was 20 to 62 years. Only one individual of good health was there in the upper age limit.

Findings

Among the five groups selected for study, Sisgars have mostly come from Arrah; the Qureshis from Gaya; the Raiens and the Ansaris from Patna districts of Bihar whereas the Sheikhjis are mostly from Bharatpur and Mathura districts of Rajasthan and Uttar Pradesh respectively. All the above groups with their endogamous nature conform largely to the idea of deme. They are all slum dwellers of different wards of Calcutta. Ansaris have a traditional occupation of weaving; the Sisgars of bangle making; the Raiens of vegetable growing and selling; Qureshis of animal slaughtering and the Sheikhjis of cattle trading. But presently 51 per cent of the Ansaris of the sample are 'bidi' or country cigarette makers; 58 per cent of the Qureshis are either meatshop owners or employed as butchers; 54 per cent of the Raiens are fruit and vegetable sellers; 33 per cent of the Sisgars are either having broken glass business or are employed in it and 79 per cent of the Sheikhjis either have cattle business and dairying or are employed in it. The remaining populations of the different groups are absorbed in various occupations. No, Ansari has of course been found in his traditional occupation.

A study of the first degree cousin marriage among all the groups show that the Ansaris have 13.26 per cent; the Qureshis have 29.07 per cent; the Raiens have 21.84 per cent; the Sisgars have 18.60 per cent and the Sheikhjis have 19.05 per cent

respectively. These slum dwellers, many of whom have never visited their places of origin are living amidst incredibly crowded houses sometimes with tubercular patients. Total population of the above groups in Calcutta individually are not available. They are all Hindi or Hindusthani speakers and many can understand and speak Bengali well. Chi Square tests with reference to each character among all the groups show that out of 12 anthroposcopic characters studied, the groups are homogeneous in 10 characters. But in nasal profile and alveolar prognathism they are not. The mean values of the metric characters studied are as follows :

*Characters**Groups*

Ansari Qureshi Raien Sisgar Sheikhji

HL	185.25	184.18	187.12	184.21	190.67
HB	142.96	145.08	145.60	144.89	140.57
MFB	99.91	100.96	101.77	101.77	101.30
BZB	130.51	131.65	132.41	131.55	134.02
BGB	95.60	97.46	97.43	97.88	98.05
TFH	115.60	116.46	116.81	115.54	118.82
UFH	65.33	66.50	67.22	66.76	67.24
NH	51.22	51.47	51.11	51.19	52.00
NB	34.89	35.42	34.94	33.28	34.58
Stature	1,613.45	1,638.54	1,642.40	1,634.84	1,659.74
Sitting Height	836.01	847.79	855.55	850.52	861.82
Body Weight	45.59	51.63	53.30	50.24	55.62

In cephalic and nasal indices, the Bihar groups are quite near to the Hindu upper castes of the same state. In TFH Sheikhjis stand out distinctly from the other groups. Calculation of Sanghvi's T^2 Distance on the metric characters among the groups of Bihar show that some are nearer to one another whereas others are not. Sheikhjis are quite distant from the groups other than Raiens. Raiens have least distance from the Qureshis. Concentration of the Qureshis and the Raiens in Uttar Pradesh are more or less in the contiguous districts and the Sheikhjis are also not far away from them. The history of migration and settlement of the groups in Bihar are not known. If it is assumed that the groups have migrated from Uttar Pradesh to Bihar in different periods of time then it may be said that the geographical distance, ethnicity, and time go along with morphological distance.

H.L. DEB ROY: A SOCIO-RELIGIOUS STUDY OF THE JAINTIA TRIBE — A STUDY OF THEIR SOCIAL PHILOSOPHY, University of Gauhati, 1978, Supervisor : K.C.Dev.

The Problem

Jaintias are a tribal people who inhabit the Jaintia Hills of Meghalaya, in the North Eastern India. These hills have an altitude of 3,000 to 4,500 feet from the sea-level. The Jaintias belong to the Mon-Khmer group of people and speak a language which is Austro-Asiatic. Their present population is less than one and a half lakh. The Jaintia hills are surrounded by Assam and Bangladesh plains in the north and south respectively. In the eastern side, they border with the North Cachar Hills of Assam. They have marked differences in physical stature, language, social institutions, culture, and religious practices from the other neighbouring tribes (except the Khasis). Though they are numerically not so much strong, it is rather striking how they could preserve their socio-religious and cultural distinctiveness.

Again, prior to the British annexation, they were under the Jaintia Kingdom having its capital at Jaintiapur, in the southern foothills of the Jaintia Hills. The erstwhile Jaintia Kingdom had two distinct parts of territories, namely the Jaintia Hills and the Jaintia plains comprising the Jaintiapur and Falijur parganah which had gone to the Sylhet district of East Pakistan, now in Bangladesh. The plains had the majority of population and the wealth for which the last Jaintia King, Shri Rajendra Singha voluntarily gave up the hills when the Britishers forcibly annexed the plains (in A.D. 1835). The Jaintia kings were professed Hindus of Shakta cult.

The Jaintias live in small villages 3 or 4 miles apart from one another and negotiable only through dense forests. They are one among a few people in the world who practise matriarchate, visit-marriage, and clan-exogamy in marriage. They decide all local issues in the village-court (village Durbar) which is predominantly a male one. Their approach in deforestation (for shifting cultivation) and production are collective. Conception of private land-holdings were unknown till the other day. They worship natural objects like forests, streams, lightning, stones etc. They were thought to be animistic by some western ethnologists and theologians. But, side by side, they have a conception of supreme or impersonal God, -'U Blai'. They had no written script of their own. Their culture, religion and tradition were governed by myths, legends, tales etc. Strangely enough, they do not eat beef, burn their dead, use water and fire in all festivities, like other Hindus. But, they have no temple or image worship barring two exceptions. Their religious activity involves prayer, tale-telling, and vow-fulfilment.

The objects of the study were the socio-religious institutions and practices of the people; to determine the original contents therein; and to find out the reason for retention of matriarchate, visit-marriage, clan-exogamy, ancestor-worship etc. It is also attempted to determine the influence of matriarchate and ancestor-worship in

the evolution of religious consciousness and discover the moral attitudes of the people.

Again, it is strange that they are categorized as 'non-Christians' though it is known that they belonged earlier to a Hindu kingdom. They profess privately as Hindus, but officially, they hesitate to align with the Hindu culture and religion. The scholar has lived among them to understand the causes which compel this tribe to discover a distinct identity separate from the Hindus, i.e. in all, to discover their social philosophy.

Methodology

The Jaintias have not been dealt with separately by any scholar. P.R.T. Gurdon was a pioneer ethnologist who wrote *The Khasis* in A.D. 1907 and discussed the Jaintias only as a part of the Khasi tribe. Historical references are found only in the chronicles of Ahom kings and Koch kings. Besides that, the Jaintia tribe remained neglected in the eyes of academics, though the Jaintias could rightfully claim to be a distinct group of people who had a kingdom. As the published works on this tribe were scanty, this work is based on field studies through questionnaire, interviews, oral testimonies of reliable persons etc. The methodology was primarily inductive.

Findings

The Jaintia tribe in a group of few, migrated to this hill consequent on some historical necessities. Depletion and demand of male population compelled them to institutionalize matriarchate and visit-marriage. Their habitation is made in relation to agriculture and shifting cultivation. Surrounding hostile natures and ignorance made them animistic, but ancestor worship was an original element in their religious behaviour. Market and marketing, roads and communications in these hills posed problems. Because of segregational life in villages, they developed some differences in linguistic details, observance of socio-religious functions and in God-heads. Their life before the British was monolithic.

There are three stages of development which influenced the people very much. The first period of influence is manifest through the tale of 'Cock'. The cult of cock (as a sacred bird) might speak the influence of Ahoms. The second stage, started with the mythological introduction of cow (as a divine saviour) which might represent the Hindu influence of Jaintia kings. The third influence has come from Christianity which is very much visible in many spheres of tribal life. The effect of matriarchate on the society is a mixed one. It helped them retain their racial and cultural distinctions. Because, in a society where mother matters, the father is unable to leave behind any mark. But the evil effects of matriarchate are coming up gradually with the introduction of modern mechanical life. Matriarchate have ill effects on the male

population. Conception of private landed property has already come in, thereby paving the way for feudalism in the near future. Modern system of administration from top has widened the gap between the people and the administration of justice. At the moral plane, it was found that they could overcome self-survival but they could not overcome race-survival instinct. So their morality is sectional and not universal, it is tribal and they are very much concerned with the survival of their race — pure and distinct.

The Britishers found difficulty in taming these people. They started bribing and conversion which paid them dividends in the long run. The Britishers classed them as 'non-Christians' which till now persists in the official records. The development of roads and communication, mobility of population, advancement of education and medicine are coming in conflict, either directly or indirectly, with the established notions of the tribals. Non-observance of tribal rules and customs can no more force one to be ostracized or banished. Again, the socio-religious practices which involve cumbersome rites and observances are forcing many to embrace Christianity. Many of them are prone to equate modernity, education, civilization etc with Christianity. It is, perhaps, because of the fact that the Christian Missionaries gave them their written script (in Roman), formal education and western civilization. When their tribalness is emphasized too much and they are denied the belongingness to a religion (as classed 'Non-Christians' in official circles) they are led to believe that they have no religion and they are distinct from the Hindus. Again, they lived all along, more or less in seclusion too mindfull of their racial survival. They have a 'numerical inferiority complex'. They fear to lose their racial identity. So, tribalism is growing day by day and a day may come, when the tribe in quest of separate identity, may denounce 'Indianness' altogether.

Economics

N.P. AGRAWAL : ANALYSIS OF FINANCIAL STATEMENT OF ALUMINIUM INDUSTRY IN INDIA, University of Rajasthan, 1976,
Supervisor : H.C. Rana.

The Problem

THE ALUMINIUM industry in India is one of the new industries which had its expansion in the post-independence period. This is the only non-ferrous metal for the development of which adequate ore reserves, namely bauxite are available in India. Aluminium and alloys are used for electrical conductors, chemical and food processing equipment, domestic utensils, railway rolling stock, aircraft, automobiles, ship-building etc. Aluminium is a good substitute for copper, lead, and zinc for which the country has to depend mainly on imports.

The study is based on the annual reports and accounts and other publications of aluminium industry in India. The period of study is fourteen years from 1963 to 1976.

Methodology

The data relating to the financial statements of all the four aluminium companies in India have been collected from the published Annual Reports and Accounts of these companies for the years 1963 to 1976 which were obtained directly from the registered offices of the respective concerns. For comparative study Annual Reports and Accounts of V.A.W. Aluminium West Germany, Alusuisse, Switzerland, five American aluminium companies and some Japanese aluminium companies were

obtained directly from their head offices. Some publications of the Aluminium Association of U.S.A., Standard and Poor's Corporation, American Bureau of Metal Statistics, U.S. Department of Interior, Bonneville Power Administration, The Educational Foundation for Nuclear Science, U.S.A., Centre for Economic and Social Information, Geneva and from various other mining and related departments in India and U.S.A. have been collected. The data relating to other industries in India for comparing it with data relating to aluminium industry have been collected mainly from Reserve Bank of India Bulletins, Basic Statistics Relating to Indian Economy, IDBI's Annual Reports, *Hindalco Journal*, *Economic Times*, *Financial Express*, Records and Statistics of, Top 300 Companies and other related publications.

For the purpose of analysis financial statements of aluminium industry in India the profit and loss accounts and balance sheets of the aluminium companies have been recast and have been presented in a condensed form. The statements of cost of goods manufactured, showing total cost under various heads, have also been prepared. The figures taken from Annual Reports and Accounts have been rounded off up to two decimal places in lakhs of rupees.

The techniques of ratio analysis, trend analysis, funds flow analysis and common-size statements Analysis have been adopted for the purpose of analysing financial statements in the present study. The statistical techniques like range, index numbers, percentages, averages, standard deviation, regression and correlation, analysis of time series and graphs etc. have also been applied.

Findings

There are five aluminium companies in India—four in the private sector and one in the public sector. Aluminium Corporation of India Limited (ALCOIN), Indian Aluminium Company Limited (INDAL), Hindustan Aluminium Corporation Limited (HINDALCO), and Madras Aluminium Company Limited (MALCO) are in the private sector and Bharat Aluminium Company Limited is in the public sector.

The cost of production of the aluminium industry in India registered a rising trend throughout the period of study. The important elements of cost were raw materials and factory expenses which accounted for more than 60 per cent of the total cost.

The rising prices of raw materials followed by short supply of power were the main reasons of increasing cost while the other reasons were high rate of power supply, increased excise duty, and disturbed personnel relations.

The increasing trend of cost and the controlled unremunerative selling prices affected the profits of the aluminium industry in India adversely. The returns on capital employed and return on long-term investment were declining. However, the policy of trading on equity benefited the equity share holders of the various aluminium companies except ALCOIN and the policy followed by the managements regarding ploughing back the profits was satisfactory.

The working capital of the industry increased during the study period and about 25 per cent investment was in the shape of working capital. However the turnover

of working capital was found to be low while on the study of composition of working capital it was noted that the figure of inventories was excessive practically in all the companies and in some companies it was found that they were carrying idle cash balances during later years.

The main source of funds was profit from operation. The funds were mainly utilized for the purchase of fixed assets as the industry is of capital intensive nature. A significant portion of the funds generated went to increase the working capital during later years.

The short-term financial strength from the point of view of current ratio was found to be satisfactory while the liquid financial position judged from quick ratio was not so satisfactory due to excessive inventory. The long-term financial strength judged by debt to equity ratio was found satisfactory.

S.A.KESKAR : ENQUIRY INTO THE WORKING CONDITIONS OF NURSES IN GOVERNMENT HOSPITALS IN POONA, Poona University, 1979, *Supervisor* : P.C. Shejwalker.

The Problem

The thesis describes the scope of nursing as a profession, its growth and its importance and as a source of employment, general conditions, and the peculiarities. It gives its historical background in Maharashtra and also gives information about International Labour Organisation's contribution towards improvement in working conditions of the nursing personnel and the Maharashtra Government's efforts towards this end. The rules and procedures of the Government of Maharashtra regarding recruitment, appointment, training and the other service terms for the nurses are also described. The study draws a general picture of the nursing personnel in the sample giving particulars regarding age, caste, marital status, education etc. It analyses the entire work-life of a nurse from the point of view of the efficiency in her working. It deals with different aspects of her working conditions such as working hours, supervision, pay and allowances, leave, amenities at the place of work, load of work, occupational health protection, trade union activities etc. It describes the determinants of job satisfaction and studies the effect of each aspect of working conditions on the total job satisfaction of a nurse. Working conditions of the government nurses are observed from physical as well as psychological points of view. Living conditions of the government nurses are also studied throwing light on their families, housing and home life. The study also presents the salient features, suggestions and recommendations made by the Vanamala Mohite Committee which was appointed by the Government of Maharashtra to go into the question of improvement of nursing education and nursing services in the state of Maharashtra.

Methodology

The study has been conducted on the basis of (1) a detailed questionnaire issued to all the nurses; (2) personal interview of the office bearers of the Unions; and, (3) seminar discussion of the Government nurses.

Findings

The problems of nurses employed in government hospitals are long neglected. These problems include not only the problems as regards wages and allowances but also the problems related to so many other things such as load of work, nature of work, proportionate number of the nurses to the number of patients, transfers; promotions, job security, personal security, and status. The problems are of economic as well as of non-economic nature. Because of the very special nature of the job, the nurses are terribly overworked. It is necessary to look at the problems of these working women with more sympathy, particularly in our Indian society. Their hours of work should be reduced to six hours per work day. The pay scales and allowances should be carefully reviewed and revised. To check unrestricted inflow of patients, a long range programme of curative and preventive health case education of people should be planned and implemented. The government should explore the possibilities of opening more hospitals. To keep the number of nurses proportionate to the number of patients, necessary arrangements should be made to sanction more posts and employ people to occupy those posts. Employment of part time nurses can be a good solution for reducing the scarcity of nursing personnel. Complete elimination of non-nursing duties, provision of accommodation at the place of work, concessional accommodation, medical aid, travel and telephone will improve the working conditions of nurses. Much improvement is essential in respect of various allowances received by nurses. Quick implementation of the security measures recommended by the Vasant Rao Naik Committee, and encouragement to participation of nurses in management, establishment of a joint consultative council in each hospital, development of free and direct lines of communication throughout the nursing organization, mergers of different cadres of nurses into one State Cadre, provision of adequate education and training opportunities, provision of proper messing and resting facilities, revision of the Government rules and regulations regarding nurses, creation of a post of Director of nursing, increasing the scope of nursing services and improvement in the living conditions of nurses will lead to improvement in their performance at work. Active steps must be taken to strengthen the public image of the nursing profession as an important wing of medical science. Immediate action should be taken by the Government to approve and implement the recommendations made by Vanamala Mohite Committee. Formation of two rival unions of nurses should be discouraged as it weakens the labour movement in this profession.

K.R.SHARMA : SMALL SCALE INDUSTRIES IN RAJASTHAN - A STUDY OF REGIONAL AND AREA ORIENTED ECONOMIC PROBLEMS, University of Rajasthan, 1978, *Supervisor* M.L.Mishra.

The Problem

Small scale industries have received greater attention in India since Independence, initially under the Gandhian economic approach and later on under the Mahalanobis strategy of industrial planning. These were recognized as a core sector in view of their potential for providing employment to more persons, creating entrepreneurial climate, increasing supply of items of mass consumption with minimum utilization of scarce inputs like capital, higher technical skills and sophisticated management and decentralizing economic power in the industrial sector.

The enquiry was undertaken to understand the rôle and the problems of growth of these industries in Rajasthan and to find out how far the industrial strategy is influenced by special problems of different regions.

Methodology

The industrial complex at Kota, which has shown good potential for the development of large as well as small scale industries, was selected for an in-depth study. The enquiry covered the industries which come under the purview of the Development Commissioner Small Scale Industries. In 1975, units with investment in plant and machinery up to Rs. 7.50 lakhs were classified as small. The ceiling on investment in the case of ancillary industries was Rs. 10 lakhs.

Findings

Rajasthan is an economically backward state. It has vast land area but a major part of the terrain is arid, the soils are less fertile, the rainfall is scanty and uncertain and the climatic conditions are somewhat harsh. Population is sparse and primarily rural. Literacy is less. It has a rich base of mineral resources and large livestock population but the growth of forests is limited and the quality is poor. Agriculture is backward and dependent upon monsoons. Transport and communication facilities are inadequate and unevenly distributed. Thus, the region exhibits typical features associated with backward regions, like poor resource base, undeveloped infrastructural facilities, abundance of manpower, lack of technical skills, dependence on agriculture and primary sector with sprinkling of cottage and small scale industries. The geophysical conditions and the resource base do not provide an ideal setting for rapid economic development.

The planning for industrial development in the State has mainly emphasized on the development of infrastructural facilities. The share of industrial sector in the total plan expenditure has been small investment in industry by the Central and the State Government and the financial institutions has been also small. Thus, the economy has not experienced material change, contribution of the primary sector to the state income is predominant and the benefits of industrialization have not spread out to all the regions.

The public sector industrial service institutions like SISI, NSIC, RSIC, RSIMDC, RFC, and the RSAIC play an important role in development of small scale industries in the state. Their activities cover a wide spectrum from identification of projects to marketing of products. Their promotional activities have helped not only established and reputed entrepreneurs but also new units, units set up by new entrepreneurs and unemployed engineers and those set up in backward areas. But their working suffers due to the lack of suitable technical and managerial personnel and resources and also due to the lack of coordination and overlapping in their functions.

The state assistance programme undoubtedly proved useful in augmenting the growth of small scale industries in the State. But these are still mainly concentrated in certain regions and urban areas. The growth of different types of industries is not well balanced. There is no machinery for evaluating the benefits flowing from the investment in this core sector of economy. No precise data showing the cost and benefits of assistance are collected. The programme has remained resource oriented rather than being result oriented. Functioning of the state administration leaves much to be desired. Personnel of the development organizations lack proper orientation and training. The entrepreneurs show lack of enterprise and hanker after concessions and subsidies. There was a general clamour for representation on the official bodies for the distribution of raw materials and financial assistance.

The industrial estates and industrial areas programme could not be properly spread out over the entire state. The number of estates was too small to have a visible impact on the industrial economy. While the estates located near big cities and industrial centres were successful, those in backward areas and rural areas did not show much progress. Plots and sheds have remained unallotted and unoccupied. Most of these lacked essential infrastructural facilities. The units operated much below the levels of optimum production.

The growth of ancillary industries has been slow and halting, due to the lack of proper linkage with parent units and the lack of systematic efforts, positive encouragement and assistance by the state agencies.

The entrepreneurs took active part in the management and operation of their units. But many problems arose simply because they were not properly oriented and equipped to deal with these problems. The government rules and regulations, the procedural formalities and delays also disturbed the smooth functioning of the units. Utilization of production capacities remained low due to the shortage of working capital, outside suppliers, shortage of skilled labour, frequent power cuts, credit curbs, transport bottlenecks, and taxation problems.

Industrial development is a mighty challenge before the State. To solve the various problems of growth highlighted above it is suggested that the sphere of activity of the developmental institutions should be determined afresh for better

utilization of resources and talents. Joint consultative committees should be constituted for coordination in their functioning. Adequate funds should be provided to ensure vigorous implementation of the programmes and expansion of activities. Regional development corporations should be set up for the north-eastern desert region and the southern mountainous region. To project the image of service organizations persons with proper skills, aptitudes and talents should be recruited from trade, industry, and banking and should be given training and orientation.

Industry-wise development committees should be set up at State, district, and local levels, to initiate thinking on developmental problems and expedite action. Intensive publicity campaigns should be organized in the areas showing potential for industrialization, to motivate industrial entrepreneurs. A multiservice 'Entrepreneurial Guidance Cell' should be set up at Jaipur in the Directorate of Industries for collection and dissemination of industrial information and guidance about procedural formalities. The District Industries Offices should be equipped with technical personnel and should be linked up with the 'Cell' for efficient service to the entrepreneurs. The technical and the administrative personnel should visit industrial centres for on the spot study and decisions. Branch offices of the all India organizations should be set up at Kota and Jaipur to expedite and extend the benefits of their programmes to the State.

Considering the disparity in resource base and infrastructural development among different regions of the State, the industrial planning should aim at utilization of local resources to meet the local needs. Suitable resource based industries for different regions should be identified and developed. Industrial planning should also consider the demand aspect and consumer goods industries should be developed to meet the present and the potential local demand. Growth centres or the areas showing potentiality for growth, should be identified in different regions, for optimum utilization of resources and concentrated action. Systematic efforts should be made to identify and nurture local talents. Successful entrepreneurs should inspire and guide the younger generation.

The assistance programme should be designed to meet the requirements of all sizes, types, and regions. The financial institutions should set apart a sizeable portion of their funds for the small scale industries and the industries set up in backward areas and rural areas. Availability of raw materials should be increased through increased production and important industrial centres and make proper arrangements for their distribution. Industrial areas and estates should be developed at places showing demand for plots and sheds. Industrial areas and estates in backward areas should be made more attractive. Shed allotment policy should ensure maximum mutual cooperation and optimum utilization of common service facilities. Industrial extension service should be made more efficient. A new agency, 'Rajasthan Industrial and Technical Consultancy Organization' should be set up to provide guidance and assistance in the fields of industrial promotion, management, and development. Industry-wise joint committees of parent and ancillary units should be set up for better contacts, coordination and understanding. Small scale ancillary units should be given statutory protection against fraudulent practices and delay and default in payment. Technically qualified and experienced managers and technical personnel working in large scale industries should be encouraged to set up small

scale units for manufacturing ancillary items. Special encouragement should be given to educated unemployed, engineering degree and diploma holders, technically qualified persons, and persons from the weaker sections of this society.

The gap between pronouncements and implementations should be rigorously narrowed down. Bureaucratic red tape should not be allowed to frustrate the developmental efforts. Procedural formalities which distract entrepreneurs should be simplified. An appropriate legislation should be passed to give statutory basis to the declared state policy in view of the special problems faced by the small scale industries.

The workers should be encouraged to form cooperative societies for setting up small scale industries. The industrial cooperatives should be managed by the beneficiaries and not by the financiers and the industrial elite. Efficiency and profitability of these industries can be raised considerably by adopting modern techniques of planning and coordination, material handling, inventory control, improving working conditions, balancing investment, timely ordering of raw materials, improved maintenance and financial discipline. The entrepreneurs should be trained to adopt these techniques. Modern accounting techniques should be also adopted. Conditions of work in the factories should be improved so that the workers experience greater job satisfaction.

T.SUBBI REDDI :INDUSTRIAL ESTATES IN ANDHRA PRADESH,
Sri Venkateswar University, 1978, *Supervisor* : D.P.Sharma.

The Problem

In India the programme of industrial estates was launched in 1955 with the objective of promoting the growth of small scale industries, regional development, dispersal of small industries and establishing the small centres of industrial production by providing the necessary facilities which are lacking in a place, which is otherwise suitable for the location of industrial estates.

The study exclusively focuses attention on the industrial estates in Andhra Pradesh and covers a period of 18 years from 1957 to 1975. The study is undertaken with a view to highlighting the following aspects of industrial estates:

1. the locational and organizational facilities available in various types of estates;
2. the range of infrastructural facilities available in various types of estates;
3. the role of industrial estates in prompting industrialization of backward regions; and,
4. the operational features (efficiency) of industrial estates especially their planning and management,

Methodology

The study is based on the (1) primary data of some of the estates selected on the stratified random sample basis; (2) Secondary data collected mainly from Government reports and unpublished records.

Findings

The tendency to develop an industrial estate at the District Headquarter has to be avoided, if optimum utilization of the limited resources and the success of the programme are to be ensured. It is essential for the state to prepare detailed feasibility reports of such areas throughout the state and decide the location on the basis of industrial potential, availability of essential facilities and other techno-economic considerations. In view of the substantial expansion in the programme of industrial estate envisaged in the Fifth Plan period, the importance of preparing an advance plan for the location of industrial estates cannot be ignored.

It may even be better, if the state authorities at least in the case of such areas as are having good industrial potential but lack other essential facilities could concentrate first on improving the infrastructure of these places rather than deciding to set up industrial estates there immediately. It must be categorically stated here that only such of the backward areas, as have natural potentials for development should be selected as centres of industrialization.

It is imperative, that 'business success' is always kept in view and industrial estates are established only in places where they could help small entrepreneurs make the best use of their own limited resources and those of the nation. It is futile to try to 'grow' entrepreneurship in areas where nothing else grows. The desire for quick profits or easy money (through the sale of import licences or scarce raw materials), whipped up by Government propaganda or sharpened by Government promises, may prompt a few persons to participate in the industrial estate programmes in 'hostile' areas but will never help the nation, in anyway. The net burden of such projects is bound to be very heavy and the benefits too meagre. In fact, badly planned and ill-executed programmes do more harm than good.

Sound planning and extensive preparations must not only precede but also accompany it, if the numerous problems are to be successfully tackled and the innumerable opportunities are to be fully exploited. The industrial estates programme has suffered from 'unrealistic' approach—a kind of 'industrial romanticism'—which blinds one to the problems which are too real to be winked at. This is quite obvious from the fact that some industrial estates sanctioned during the third Five Year Plan have yet to start functioning, a large number of sheds are still vacant, and a lot of unused capacity has been existing for years. Availability of raw materials, power, skilled men and entrepreneurs, exploitation of locally available resources (including raw materials) the types of machinery etc. required, and the possibilities of competition from large scale sector - all these factors and many more required intensive planning and investigation before the best possible use is made of the

available resources. This is no easy task and 'the best possible use' has to be decided on the basis of certain economic considerations. It is true that social considerations are quite pressing, especially in developing democracies, but then it should be clearly understood that social good follows economic prosperity.

The economic rationale of industrial estate is quite sound, but the whole programme has to be implemented in a down-to-earth manner. Industrial estates as 'controlled experiment' should first have been tried at places where the total cost of such experiments would not have been excessive. This necessarily means that there is no alternative to locating them near industrial towns, at least for a few years in the beginning. The provision in underdeveloped areas of all those facilities which are already available in developed areas, will be too huge a burden to be borne. Moreover, certain factors of development cannot be created at every place. The most essential factor — entrepreneurship — is a rare commodity in an undeveloped country and even if it were available certain 'physical' factors (raw materials, foreign exchange, working capital, power etc.) are notoriously in short supply (presuming that cement, steel etc. are available for the construction of factories). The programme of industrial estates as a measure to promote intermediate entrepreneurship' i.e. entrepreneurship of a level which is much above that of the household and cottage worker and necessarily below that of the large scale producer, can be effective only on a selective basis. If all entrepreneurs were successfully 'induced to invest' there would be large rise in the demand for foreign exchange, domestic savings, and technicians.

MALATHI TIMMARAJU : A STUDY OF THE TRANSPORT EQUIPMENT INDUSTRIES IN INDIA, 1951-1977, University of Poona, 1980, *Supervisor* : V.M.Dandekar.

The Problem

The thesis was aimed at studying the development and structure of the Transport Equipment group of industries in India, between the years 1951 and 1977. The industries included in the study range from bicycles to shipbuilding, widely differing in nature. The specific list of industries included is the following : shipbuilding, railroad equipment, motor vehicles, repair of motor vehicles, bicycles and allied industries, and aircraft.

Methodology

The study confines itself to the organized sector of the industries, and to published data, and presents the development and structure of the industries in terms of both qualitative and quantitative data. The qualitative data consist of the Indian Five Year

Plans, reports of various committees and government departments, reports of the Reserve Bank of India and of individuals. Quantitative data are derived from the *Annual Survey of Industries*, the monthly statistics of production of selected industries in India, and the monthly statistics of foreign trade of India. The variables, output, capacity, capital, employment, imports and exports were studied, value data were converted to constant prices by using suitable price indices, and thus an important aspect of the thesis is the methodology evolved for the measurement of different economic variables, especially capital and capacity and their utilization. In addition, available data on costs and profits, foreign investment and foreign collaboration, as given by the Reserve Bank of India Studies are used.

Findings

The transport equipment group of industries consists of a group of industries supplying both capital and durable consumer products. Certain parts of the industry, such as shipbuilding, locomotive, wagon, and bicycle manufacture, as well as motor vehicle and aircraft assembling were in existence prior to Independence, but the importance of this industry was mainly felt at the time of the Second World War, as the industry was vital in catering to the war needs.

Thus the First Five Year Plan included the main products of transport equipment in its targets of capacity and production. Most of the targets of the First Plan were fulfilled, but subsequently, each industry faced certain problems and there were frequent shortfalls in target fulfilment.

In the shipbuilding industry, the main producing units are Hindustan Shipyard and Garden Reach Workshops. The government has aimed at achieving self-sufficiency in shipbuilding by the end of the Sixth Five Year Plan. The need for setting up a normal design research organization has been felt in recent years, and this has now been done. In addition to shipbuilding, the ship-repair industry has a great potential to earn and save foreign exchange.

Within the railroad equipment industry, locomotive manufacture fulfilled the targets of the first three Plans, but thereafter there was a shortfall, caused mainly by power shortage and delayed and inadequate receipt of equipment. The Railway Convention Committee of 1973 suggested planning for supply of components indigenously for locomotive manufacture.

As far as railway wagon manufacture was concerned, the industry has been going through a severe crisis since 1966-67. Apart from the cut in Railway orders, the industry has been facing labour unrest.

The motor vehicle industry started indigenous manufacture of vehicles only after 1950. The industry has not been able to fulfill plan targets in respect of all its products, and was hit badly by the recession in 1966-67. However, the ancillary production has made considerable headway and the industry is expected to improve its performance.

The bicycle industry was established before Independence and has made good headway during the Plan period.

The aircraft industry started producing and developing new types of aircraft after Independence and has also developed ancillary production of items like railway coaches, bus body kits and folding boats for the army, to avoid the ups and downs of aircraft demand. The industry faced problems of supply of raw materials and transport.

In the shipbuilding, railroad, equipment, motor vehicle and aircraft industries, the large scale sector predominates, while in the repair of motor vehicles and bicycles and allied products industries, although the large scale sector predominates, the small scale sector has a significant role to play.

Workers have comprised 55 to 90 per cent of the employees. The labour-output ratio declined over the years in all the transport equipment industries.

The shipbuilding industry grew fastest during the period 1968-73, while its worst period was 1966-67, the period of industrial recession. The industry faced no problem of capacity utilization. Until 1968-69 imports of this industry were high, but thereafter they declined. Imports consisted mainly of finished products. Substantial import substitution was achieved by this industry during the period under review. Up to 1970-71 shipbuilding exports were low in value, but they rose thereafter. Exports consisted solely of finished products, and were mainly to the ECAFE region and to other Asian and Oceanic countries. The industry has a low export potential.

The railroad equipment industry had its period of highest growth during 1959-65, while its worst period was 1974-75. Underutilization was high over the period under review, in locomotive manufacturing units, and it was only in 1975 that the position improved. In wagon building units, underutilization of capacity was high during 1958-61, but thereafter it was low till 1965. The recession of 1966-67 hit this industry and resulted in high underutilization of capacity, and only in 1975 did the position slightly improve. The industry's plight was due to piecemeal orders from the railways and acute shortage of suitable steel. Imports of railroad equipment have declined over the years. Earlier they consisted mainly of finished products, however, after 1965-66 imports of parts have gained importance. This industry has achieved considerable import substitution over the years. It has good export potential and its main markets are the ECAFE countries and the East European countries.

Like the railroad equipment industry, the motor vehicle industry was also affected a great deal by the recession. Underutilization of capacity has been high in this industry throughout the period under review. Imports of this industry declined after 1960-61; up to this period imports of finished vehicles were important but thereafter they consisted mainly of parts. Substantial import substitution took place in this industry during the period under review. Exports of both finished products and parts are important for this industry, and exports have increased over the years. The industry has a high export potential, especially in respect of spare parts. However, complaints have been made that prices of India's exports of this industry are high and the quality is not up to the mark. The motor vehicle repair industry has also grown substantially during the period under review.

The bicycle and allied products industry experienced its highest growth during the period 1951-58. Underutilization of capacity has, however, been high in this industry during most of the period. Import of bicycles and allied products decreased over the years; up to 1962-63 imports of finished products were important, but

thereafter imports consisted mainly of parts. This industry achieved a great deal of import substitution: over the years imports formed only 0.22 per cent of total supply in 1975. Exports of both finished goods and parts have increased over the years and the industry is one with a good export potential, especially to Africa and ECAFE regions.

The aircraft industry had its best and worst periods during 1966-67 and 1968-74 respectively. Imports of this industry's products fell over the period under review and consisted mainly of parts. Exports of these products commenced only in 1956-57 and increased over the years. The main market has been the European Common Market Region. The industry, however, has a low export potential.

In the period 1950-51 to 1955-56 paid-up capital was the major item in liabilities of the transport equipment industries. However, by the period 1970-71 to 1974-75, borrowings had become the major liability of the group. On the assets side, inventories have been the most important item.

External sources have been more important than internal sources of funds for this group of industries. Amongst the internal sources, provisions and reserves and surplus have been most important, whilst among external sources, borrowings and trade dues and other current liabilities have been most important.

In general, a greater proportion of profits was distributed in the form of dividends than was retained. Sales of the industry were shown to be profitable, while capital and owned funds were not profitably used. The current rates indicate that the industry is stable, but the quick ratio indicates that the industry would not be able to raise adequate cash in an emergency situation.

Prior to 1964, foreign investment came mainly from private sources, and only after this year did investment from official sources become important. Amongst the different types of foreign private investment, direct investment predominated. The transport equipment industries have been quite dependent on their foreign collaborators, especially in respect of technical collaboration. Collaboration was most often in the form of minority participation firms. Collaborations involved payment of dividends, royalties and technical fees, and, in most cases, restrictions on exports of the collaborating Indian firm.

J. VASANTHAKUMAR: A STUDY ON BLOCK-LEVEL ADMINISTRATION AND ITS COMPATIBILITY WITH AGRICULTURAL DEVELOPMENT REQUIREMENTS OF SMALL AND MARGINAL FARMERS, Indian Agricultural Research Institute, 1983, Supervisor : S.N.Singh.

The Problem

Growth with social justice has been the accepted philosophy of development in India. The block-level administration is reported to have failed in combining the two

elements, especially in the case of agricultural development of small and marginal farmers. Hence, there is a need to strengthen the block-level administration to meet the development requirement of small and marginal farmers. The study was designed with the following objectives:

1. To study the structure and behaviour of block-level organizations and their linkages;
2. to study the development orientation of block-level organizations;
3. to study the agricultural development requirements of small and marginal farmers;
4. to identify the factors that act as constraints in meeting the agricultural development requirements of small and marginal farmers; and,
5. to provide suggestions for effective functioning of block-level organization in meeting the agricultural developmental requirements of small and marginal farmers.

Methodology

The study was conducted in Coimbatore district of Tamil Nadu. Out of the twenty-two blocks of the district, five blocks were randomly selected for the study. All officials concerned with agricultural development of small and marginal farmers at block-level constituted the sample of 122 respondents. Further, two villages were randomly chosen from each of the selected block and fifteen small farmers and fifteen marginal farmers were randomly selected from each of the selected ten villages. Thus, a total of 300 farmers comprising 150 small farmers and 150 marginal farmers constituted the farmer respondents.

The structure and behaviour were studied in terms of hierarchy of authority, division of labour, system of rules, impersonality, rationality, and rule orientation. Orientation to development administration was studied in terms of commitment to work, change orientation, result orientation, orientation towards peoples' participation, leadership orientation and orientation towards organizing the poor. Agricultural development requirements were studied in terms of input gap, credit gap, and technological gap. The study also included the constraints as expressed by the respondents. Data were collected in *ex-post facto* design through personal interviews.

Findings

1. The proportion of respondents who reported high bureaucracy in block-level organizations along structural dimensions varied from eighteen per cent to about thirty per cent. A larger proportion of the respondents reported moderate bureaucracy in terms of hierarchy of authority and division of labour. About 45 per cent of respondents reported low bureaucracy in terms of system of rules.

2. Around one-fourth to one-half of the respondents were highly bureaucratic in block-level organizations along behavioural dimensions. Over one-half of the total respondents reported high impersonality, moderate rationality, and moderate rule-orientation. In general, one-third to two-thirds of the responses falling under moderate group indicated bureaucratization to a moderate degree.

3. The staff of Training and Visit System and Seed Depot as well as the staff of District Rural Development Agency and the Banks reported mutually a strong linkage in planning, in arranging credit, inputs, marketing, and in providing feedback.

4. About 40 per cent of the respondents were highly oriented towards change and result, while about 30 per cent of the respondents were highly committed to work. About 30 per cent of the respondents revealed low orientation towards organizing the poor.

5. Majority of the respondents were moderately oriented to development characteristics like commitment to work, change orientation, result orientation, orientation towards peoples' participation, leadership orientation, and orientation towards organizing the poor.

6. Hierarchy of authority, system of rules, impersonality and rule orientation characteristics of bureaucracy were found to have significant negative correlation with orientation towards change, result and organizing the poor. Hierarchy of authority and impersonality were found to have significant, negative correlation with commitment to work, orientation towards peoples' participation and leadership orientation. Division of labour and rationality were not significantly correlated with commitment to work, change orientation, result orientation, orientation towards people's participation, leadership orientation and orientation towards organizing the poor. However, negative correlation was observed between many of these characteristics.

7. There was no significant difference between small and marginal farmers with reference to input gap, credit gap, and technological gap. A vast majority of the small and marginal farmers reported low input gap (90.39 per cent), moderate credit gap (74.01 per cent), and low technological gap (83.28 per cent).

8. A vast majority (83.60 per cent) of the officials of block-level organizations reported that too much paper work acted as a constraint. Considerably a larger proportion of the respondents considered the interference by influentials and inadequacy of staff (68 per cent and 56 per cent, respectively) as constraints. Poor linkage and lack of incentives were considered constraints by about 45 per cent and 84 per cent of the respondents, respectively.

9. Majority of the small and marginal farmers reported higher cost of cultivation (75.34 per cent) and unpredictable price for produce (92.67 per cent) as constraints. About 86 per cent of the respondents reported about untimely supply of inputs and non-availability of credit, 68 per cent reported about lack of subsidy, 92 per cent reported about inadequacy of credit, 83 per cent reported about complicated procedures in getting credit facilities, and about 55 per cent of the farmer-respondents considered inadequate marketing facilities as constraints.

C.R. ANANDA RAO : PUBLIC ENTERPRISE AND PARLIAMEN-
TARY COMMITTEES, Osmania University, 1979, *Supervisor* :
J. Satyanarayana.

The Problem

'Public enterprise' refers to industrial and commercial undertakings of Central Government which are in the form of statutory corporations and companies registered under Indian Companies Act. The Parliamentary Committees for the purpose of this study mean the Estimates Committee, the Public Accounts Committee, and the Committee on Public Undertakings.

The purpose of the study is twofold. Firstly, it is to identify the major areas covered by the Committee and analyse the nature of recommendations. Secondly, it is to find out the Government's reaction to the more important of the Committee's recommendations and the decisions thereon, and thereby see the impact of the recommendations on the Government's policy *vis-a-vis* public undertakings and on the working of the public undertakings.

The study covers the period commencing from the First Lok Sabha till the end of Fifth Lok Sabha (1952-53 to 1976-77). This study, however, covers only up to 1976 because the reports of the Committee on Public Undertakings were submitted up to April 1976 even though the Fifth Lok Sabha was extended up to 1977.

Methodology

The main sources of data are the reports of the Estimates Committee, the Public Accounts Committee, and the Committee on Public Undertakings.

Findings

Public enterprises have progressively occupied the commanding heights of the Indian economy. The future of the economy depends on the efficient working of the public enterprises. These public enterprises, and the Ministries which control them, are accountable to Parliament. The public accountability is best served by the Parliamentary Committees on Public Undertakings. But more than the constitution of a Parliamentary Committee on Public Undertakings, it is the working of the Committees and their effectiveness which has relevance to this study. Hence, a study of the areas identified, the nature of recommendations of the Committees, and the impact of the recommendations gain importance.

The analysis of the recommendations of the Estimates Committee reveals that the recommendations are mostly general in nature and, added to this, the existing policies of the Government *vis-a-vis* public enterprises or the situation obtaining in

public undertakings do not seem to have been taken adequately. At times, the Committee did make recommendations without fully looking into the practicability of their implementation. Finally, on the basis of analysis made of the areas and aspects covered by the Estimates Committee, it can be said that the Committee dealt with the problems in a cursory manner.

The coverage of the Public Accounts Committee in regard to the Public Undertakings was limited in the sense that it mainly concerned with defects as revealed in the Audit Reports of the Comptroller and Auditor General and the limited coverage of the public sector undertakings. Sometimes the comments of Comptroller and Auditor General have been put in the form of recommendations of the Committee. Moreover, the Committee's suggestions seem to be of fault finding nature and present, more or less, an accounting view and fall short of a broad review of all aspects of management and organization of public undertakings.

The Committee on Public Undertakings was set up in the year 1964 and had taken over the functions of the Estimates Committee and the Public Accounts Committee in regard to the public undertakings. During the present period of study, the Committee covered fifty-two public undertakings which form about 40 per cent coverage of the undertakings, as the total number of the undertakings stood at 129 during the year 1975-76. At this rate, many small undertakings may not be covered at all in the near future. Even though the Administrative Reforms Commission recommended that horizontal studies may be taken up by the Committee on public undertakings the Committee took up studies more on individual undertakings than horizontal ones.

The reports on Project Planning and Administration of Projects, and the horizontal studies on township and on management and administration in public undertakings have paved the way for the Government to come out with clear cut policies. The horizontal study on foreign collaboration has given an account of the defects that are existing in foreign collaboration agreements, which have to be rectified by the Government and the public undertakings. Hence the horizontal studies covering all the public undertakings assumed relevance in this area because the problems and intricacies are more or less the same in all public undertakings. There is need for further horizontal studies of this nature by the Committee because of the expanding nature of the public undertakings in terms of starting of new projects and expansion of the existing projects.

In the area of organization and management, the aspects spelt out are objectives of organization, organizational set up, management boards, and control over public enterprises and management accountability to Government. In this area the Committee was persistent in its recommendations and in the implementation of the recommendations of the Estimates Committees, Krishna Menon Committee and Administrative Reforms Commission which were accepted by the Government as well.

The Committee on Public Undertakings had little to contribute in the area of personnel policies and labour management relations in public undertakings in the sense that these recommendations had either already been thrashed out by the experts in the field, the Five Year Plans, and by the Administrative Reforms Commission and the National Commission of Labour or were being generally

followed in practice as a matter of general policy by the Government. However, in so far as the impact of the recommendations of the Committee is concerned, it had been in the nature of reminding the public undertakings to follow the already laid down policies and making the Government to bring these policies into the limelight and make necessary changes to suit the needs of public undertakings which have to stand as model employer.

In the area of financial management, the Committee covered debt-equity ratio, internal finance, and working capital as source of finance, budget, costing, depreciation policy under management of aspects, pricing policy, return on investments and dividends under financial results, financial rules and account heads, and Financial Adviser under financial organization and lastly audit. The Committee's recommendations were very effective on the aspects of debt-equity ratio, working capital, budget, pricing and Financial Adviser. They covered policy matters and Government has come out with clear-cut policy in tune with the recommendations of the Committee. The Committee's recommendations on certain aspects, though not very effective, had their impact as the Government issued circulars for the implementation of such suggestions and reiterations of the Committee. These relate to internal financing, standard costing, straight line method of depreciation, return on investment, financial rules and account heads, and audit. Finally, the impact of the Committee's recommendations was very effective in the area of financial management but there is need for further horizontal studies, as the earlier one was done as far back as in the year 1967-68. This would facilitate the Committee to evaluate the existing situation of the Public Undertakings and recommended the cognizance of the growing techniques in the field of the financial management.

The aspects covered in "Some Other Aspects" are, utilization of capacity, materials management, and inventory control, public relations and publicity, and the Bureau of Public Enterprises. The main thrust of the suggestions of the Committee in regard to utilization of capacity was that effective steps should be taken to work the plants to their rated capacity and to effect economy in expenditure so as to improve their financial working. The policy recommendation of the Committee that an Expert Committee should be appointed for capacity utilization seems to be superfluous in the light of its view that the measures taken by Government for improving the same are adequate. The recommendations of the Committee on materials management and inventory control proved to be very effective as they have resulted not only in the issuing of comprehension circulars and guidelines on all the aspects covered by the Committee but have also shown progressive improvement in this regard. Hence, the Committee in its subsequent reports was concerned with effective follow-up of the Government circulars and the guidelines issued by Bureau of Public Enterprises. The suggestions given by the Committee in its report on public relations and publicity were effective as Government had issued instructions and guidelines prepared by the Bureau of Public Enterprises on the need to inform the public not only of the products marketed by it but also the functioning of the undertaking. The recommendations of the Committee on Public Undertakings are effective especially in regard to the improvements in the functioning of Bureau of Public Enterprises.

JAGDISH CHANDRA SINGHA : SOCIO-ECONOMIC DEVELOPMENT OF THE UNITED KHASI AND JAIINTIA HILLS AND GARO HILLS SINCE INDEPENDENCE, University of Gauhati, 1979, *Supervisor : S.N.Mehrotra*.

The Problem

Prior to the 15th August, 1947, the hill areas of the erstwhile State of Assam were Partially Excluded Areas. They were administered by the Provincial Legislature. The administrative machinery was sketchy. A kind of distinct barrier was maintained between the Hills and the Plains during the pre-Independence period. Such restrictions deepened the isolation of these areas. Under such an administration, hardly any economic progress was possible. The economic disparity between the Hills and the plains widened leading to promotion of separatist tendencies amongst the people of the Hills. The continued backwardness of the Hill people in the post-Independence period had further aggravated the tendencies.

During the independence movement they expected that the Hill Areas of Assam would be declared a separate State immediately after independence. This expectation did not materialize and rather a constitutional arrangement was made for the administration of these areas.

Under the Constitution of India, the tribal areas of the erstwhile State of Assam are governed by the provisions of the Sixth Schedule to the Constitution of India. The people were, however, dissatisfied with the working of the District Councils. To quote the Commission on the Hill Areas of Assam, "our evidence revealed widespread dissatisfaction with the working of these Councils. This dissatisfaction was explained to be the result of the failure of the Councils to promote the development of their areas."

A demand for the creation of Eastern Frontier State was made to the States Reorganisation Commission, in 1954. This was, however, not considered feasible by the Commission.

Methodology

The present work is the outcome of a combination of field study as well as desk research work. The scholar has consulted the official publications of the Central and State Governments. The books, periodicals and reports were consulted in National Library, Calcutta, Indian Institute of Management, Ahmedabad, Sardar Patel Institute of Social and Economic Research, Ahmedabad, State Central Libraries, Assam and Meghalaya, Gauhati University Library and the Libraries of the Assam Secretariat Record Room, Department of Economics and Statistics of the Government of Assam. The author also conducted a socio-economic survey in the State in the year 1977-78, and made a number of visits to the rural areas of the State to hold discussions on various aspects of the economy of the State with residents and also

such of those non-residents who had an intimate knowledge of the economy. Where there were no statistical data for investigation, the observational technique was adopted.

Findings

In 1960, the Assam Legislative Assembly passed the Assam Official Language Act, 1960, providing Assamese as the official language of the State. The decision created an agitation among the Hill people. The Hill State movement took a new and threatening turn from then on and an organization called the All Party Hill Leaders' Conference (APHLC) was brought into being.

As a result of the movement for a separate State, the autonomous state of Meghalaya was created on 2 April, 1970. But when the then Prime Minister announced in the Lok Sabha that Himachal Pradesh would be granted full statehood, the APHLC urged the Prime Minister to complete the process of reorganization of Assam by granting full-fledged statehood to Meghalaya. Finally, the present full-fledged state of Meghalaya came into existence on 21 January, 1972.

Thus, the circumstances leading to the establishment of the state of Meghalaya were cultural and economic. It was contended that the Language Bill (aforesaid) discriminated against the hill people because they have to learn Assamese to be able to get employment in the State. They would remain second class citizens. It was also contended that they would not be able to go for higher studies in Assam. As such, the Bill providing the Assamese as the official language of the State, according to them, is nothing but an attempt to assimilate them. But "even amongst the Hill people each tribe was zealous of its identity and interests and was afraid of being swamped or exploited by other tribal groups larger in number and more advanced economically and educationally."

The economic aspect of the political movement leading to the establishment of the State of Meghalaya was the desire of the people for their early economic development. Thus, the challenge to the economic development of the State is explosive.

The region presents a paradoxical example in support of the contention that it is not necessary to find the people prosperous and happier in the areas where there is rich natural endowment.

M.B. PADKI : LONG-TERM AGRICULTURAL FINANCE THROUGH COOPERATIVE IN INDIA : WITH SPECIAL REFERENCE TO MAHARASHTRA STATE, University of Poona, 1979, Supervisor : G.J. Kundalpur,

The Problem

The institution of land mortgage banking in the country began in the late twenties but loaning was restricted to redemption of old debts and occasionally for buying land or ownership rights in land. The All-India Rural Credit Survey Committee (1954) while reviewing the agricultural credit situation of the country came to the conclusion that the land mortgage banks with their experience of mortgage lending in the field were an ideal agency for implementing the national policy of increasing agricultural production by making available long-term investment loans to progressive farmers for undertaking land improvement measures, and in the main for digging wells and purchasing water lifting machinery, for the purpose. The responsibility of development orientation in their lending operation was thrust on them and overnight they came to be called land development banks. However, a legitimate field of activity came to be earmarked for them.

Till 1969, the lending of investment finance in agriculture was the sole prerogative of the land development banks organized, initially in the early thirties itself in the cooperative sector. Between 1954 and 1969, the experience of lending long-term agricultural finance by the land development banks on a monopolistic basis, however, left much to be desired. The cooperative institution was turned into a handmaid of the State departments that were under compulsion to set plan targets and to get them fulfilled. This along with the steadily mounting overdues highlighted the problems faced by the land development banking system as a whole. Its lapses and failures notwithstanding it is hypothesized that the cooperative land development banking system is the most suitable type of organization for providing long-term investment finance to agriculture. The attempt inevitably leads to an appraisal of the apparent inconsistencies as well as the broad working of the land development banking system.

The thesis traces the genesis and evolution of the cooperative land development banking system. It evaluates the functioning of the organization within the framework of the requirements of development lending under the post-RCS policy recommendations, the changed context of the demand to modernize the agricultural process, and the creeping in of the non-cooperative elements like politicization and heavy dependence on the State.

Methodology

For the purpose, data of a field enquiry to study the phenomenon and causes of overdues are analysed. The study is concluded by a discussion of the possible

remedies and of the prospects of long-term agricultural finance through co-operatives.

Findings

The analysis leads to a justification of the contention that despite the obvious shortcomings and lapses of the land development banks and despite the introduction of other agencies like the commercial banks and the rural banks recommended by the Banking Commission (1972) the cooperative land development banking system continues to be the most suitable agency for the dispensation of long-term agricultural finance in India. The principal reason is the radical change that has come about in the attitude towards institutional finance itself and especially the long-term investment finance. Other important reasons are the large variations in soils, crops and cultivation practices, the immense variety of individual agricultural situations, the necessity of educating the borrowing farmers in the proper use of investment credit and in modern methods of cultivation and finally the need to accept group responsibility for minimizing the risk of default. Primarily the problem is one of numbers and the provision of long-term agricultural finance; within the given constraints, would not be possible unless the numbers have a say and cooperate with the policy-makers in the sanction, disbursement and recovery of the long-term finance.

It is contended that the analysis, by bringing out the inherent incompatibilities in long-term agricultural finance and cooperation, would be helpful in the reformulation of the credit policy, its administration, and the recovery of loans by the land development banking system as well as in the restructuring of its management.

M.P.DHONGADE: A STUDY INTO THE RELATIONSHIP BETWEEN SIZE OF HOLDING AND PRODUCTIVITY IN INDIAN AGRICULTURE, University of Poona, 1979, *Supervisor* : N.Rath.

The Problem

The relationship between size of holding and productivity per acre in Indian agriculture has become a topic of considerable controversy in recent years. The starting point was the article published by Prof. A.K.Sen in the *Economic Weekly* in February 1962. Based on the empirical data put out by the farm management studies, he observed the existence of inverse relationship between size of holding and productivity per acre in practically all the regions in the country. Because of certain policy implications like land reforms, co-operative farming, etc., it became an issue of considerable debate and discussion and the debate still continues. However, with the issue of inverse relationship between size of holding and productivity in Indian agriculture has not been finally clarified and settled.

The broad objective of the study is to critically analyse the farm management data for Maharashtra State to throw greater light on the controversial issue of the inverse relationship between the size of holding and productivity per acre.

Methodology

The disaggregated level data collected by the cost accounting method in different farm management studies undertaken in the State under the auspices of the Ministry of Food and Agriculture, Government of India, have been used in the study and analysed in a variety of ways.

Different measures of 'size' of holding have been used and different methods of standardization of holdings for qualitative differences in lands have been attempted. The use of scatter diagrams as well as non-parametric rank correlation tests have been made. Both simple linear and long-linear regression functions are fitted for studying various aspects in the context of size-productivity relationship.

Findings

The relationship between the size of holding and the output per acre for total crop production by using different measures of 'size' indicated that in majority of the cases the regression coefficients were negative though they were not statistically significant. Thus, there appears to be a tendency of inverse relationship between size of holding and productivity per acre even when the disaggregated level data are used. The tendency of inverse relationship was stronger when the measure of 'total occupied area' was used; it became weaker when the measures of 'net cultivated area' and 'gross cropped area' were used. Thus, the measure of size does influence the size-productivity relationship to some extent.

The analysis of data for individual villages and selected crop did not change the picture much. The inverse relationship was largely noticed in case of staple crops like jowar and bajra.

The comparison of relationship for the data over a period of time and for different functional forms, namely linear and log-linear, indicated that the size-productivity relationship is not stable; it changed over a period of time and also changed with the change in the functional form in many cases.

It was hypothesized that the tendency of inverse relationship was basically due to the qualitative differences in the lands and due to the differences in the extent of irrigation with different farmers. Four different methods of standardization of lands for quality were attempted and the relationship between the standardized holding and the productivity per acre was studied. The standardization based on the 'land value' indicated the picture contrary to the one observed in the unstandardized holdings. The regression coefficients were found to be positive in all the cases. This clearly shows that the inverse relationship between the size of holding and productivity per acre which one observes in the unstandardized data is basically due to the quality of soils and irrigation facilities, smaller farmers having proportionately more land

of superior quality and with irrigation facilities. This is the substantial finding of the study.

In most of the earlier studies, the higher per acre output on small farms was sought to be explained in terms of greater input of labour by smaller farmers who have larger family labour supply compared to their lands. This formulation was verified in the study. It was found that there was an inverse relationship between the size of holding and the labour input per acre. Two reasons are postulated for this. In the first place the larger application of labour per acre of net cultivated area on small farms would be due not only to the greater incidence of double cropping and irrigation but also due to the larger proportion of superior quality, even under unirrigated condition of smaller farms. This latter factor leads to a greater requirement of labour on smaller farms, for the greater productive potential of the better soils requires larger input of labour under the given farm technology. The second postulate of course is the well-known fact of larger per acre supply of family labour on small farms, with low opportunity cost.

Thus our examination of the data on labour input per acre at the total farm level indicated the well known negative relationship. But at the individual crop level, it was found that the only relevant farm operation on which the small farmers put in more labour per acre was 'weeding, inter-culturing and after care'. This we argue as an indication that the larger input of labour in small farms is mainly due to the lands of superior soil with them which requires greater input of labour for weeding and interculturing. Of course, this does not rule out the possibility that the greater supply of family labour in small farms also led to its greater use. But we suggest that while this may be a reason for the greater application of labour on smaller farms, it may not be making very significant contribution to the yield level on smaller farms. For if this were significant, it would have led to higher output per standard acre on such farms, even after standardization had taken care of the effect of differences in soil quality on yield rates this exercise, therefore, leads to these conclusion that available evidence about the negative relationship between per acre out put and size of holding is mainly due to greater proportion of superior quality of land and irrigated area in smaller farms.

The exercise also shows that this inverse relationship is noticeable in situations where the major inputs of agriculture are land and labour, and other inputs are at minimum required level. When the technology of agricultural production changes, and inputs other than land and labours like irrigation, improved seeds, fertilizers — become relatively more important, this negative relationship ceases to be noticed even at the level of output per unstandardized acre. This would be due to two reasons, the greater ability of larger farmers to commandeer better seeds, manures and fertilizers and the credit needed for this; and the lesser importance of differences in land quality and of labour input in affecting total production.

N.R.RAMANATHAN : A STUDY OF THE SELECTIVE CREDIT CONTROLS IN INDIA, University of Bombay, 1979, Supervisor : B.G.Bapat.

The Problem

The study seeks to examine the selective credit controls operated by the Reserve Bank of India from the time they were first used in a systematic manner, that is in May 1956 to the end of the year 1977. The study discusses the various techniques employed by the Reserve Bank of India in its selective credit control operations and the impact of such controls on the level of advances of the scheduled commercial banks against the controlled commodities and their price levels. Certain suggestions for improving the effectiveness and towards simplification of the controls have also been made. The future of selective credit controls as a tool of monetary policy of the Reserve Bank of India has also been discussed.

Findings

While on the one hand, the credit policy had to be fully geared to meet the needs of an economy embarked on ambitious development programme, it had, on the other hand, an equally important task of restraining credit expansion to impart reasonable stability to the economy. Thus, in the initial years of the plan period, if the emphasis of the Reserve Bank of India was on 'controlled expansion' of credit, in the later years, however, the credit policy of the Reserve Bank of India was expansionary in character which was in tune with the needs of a developing economy.

Selective credit controls were first used in the United States of America in 1934 to control stock market credit. It was subsequently extended to consumer durable installment loans and real estate credit. The importance of selective credit controls in the package of monetary weapons of the central bank came to be recognized widely throughout the world.

The study covers a period of 22 years from 1956 to 1977. Though the Reserve Bank of India was invested with the powers to operate selective credit controls by the Banking Regulation Act of 1949, no systematic use was made of this weapon till the beginning of the Second Five Year Plan. In the Indian situation the sensitive areas of credit control which required selective treatment were mainly confined to agricultural commodities. Thus, the first commodity which came under selective credit control of the Reserve Bank of India was paddy and rice. This was followed by wheat and other foodgrains, cotton and kapas and cotton textiles, sugar, gur, and khandsari, oilseeds and oils, raw jute and jute goods. Shares and clean advances were also under selective control between March 1960 and September 1965. The numerous techniques used by the Reserve Bank of India in the operation of its selective credit controls in respect of these commodities and the impact of the various directives on the advances and price level of the controlled commodities are

studied.

The selective credit controls were applied by the Reserve bank of India only to scheduled commercial banks in the beginning, non-scheduled commercial banks and co-operative banks being excluded from the application of this control. With the amendment of the Banking Regulation Act of 1949 in 1963, Reserve Bank of India acquired powers to control credit in respect of co-operative banks as well. Reserve bank of India, thus, brought cooperative banks also under the purview of selective credit controls in April 1967. The commodities covered by the selected controls in respect of the co-operative banks were limited to cotton and kapas, foodgrains, sugar, gur and khandsari, and oilseeds and oils. Due to lack of sufficient data relating to advances by co-operative banks against the controlled commodities, the study deals with the advances by scheduled commercial banks.

The main conclusions are that selective credit controls as they have been operative in India have had a fair measure of success both in controlling the advances of scheduled commercial banks against the controlled securities and their price levels. While the success has been more pronounced in the case of reduction of advances, on the price front it has not been that impressive for obvious reasons. Prices are determined by the forces of supply and demand with innumerable other factors interacting on them. As such, a mere reduction of bank credit against a commodity cannot bring about the desired reduction in its price. Another important finding is that basic and deep-rooted disequilibrium in supply and demand of a commodity cannot be rectified satisfactorily by monetary measures, much less by selective credit controls alone. It calls for action on the economic front, especially in increasing and stabilizing production of agricultural commodities, industrial raw materials, and items of mass consumption. Action on the fiscal front is also called for in successfully controlling effective demand. Selective credit controls can, at best be used as short term remedies to soften the impact on prices of violent fluctuations in supply and demand of commodities. It can never be used successfully for long and continuous periods to correct basic imbalances. Some of the important suggestions offered in the study relate to the need for better collection and compilation of data regarding compliance of directives by the banks, more prompt and vigorous follow-up action by Reserve Bank of India, rationalization and simplification of the provisions of the directives, complete withdrawal of selective controls in respect of commodities which form relatively very insignificant proportion of the total advances of commercial banks against all the controlled commodities and in the case of small borrowers against all controlled commodities up to, say, a limit of Rs. 25,000 in each case.

ABRAHAM JOSEPH : PROBLEMS AND PROSPECTS OF INDIA'S TRADE WITH JAPAN, Aligarh Muslim University, 1984, Supervisor: Idris Ahmed Querishi.

The Problem

If the experience of India's trade with Japan during 1951 to 1973 is reviewed in the perspective of India's economic development, the trend in the trade growth between the two countries cannot be considered desirable. Unless India's exports to Japan register a faster growth, the expansion of bilateral trade growth may not be possible.

The study seeks to identify the basic structural factors that had not facilitated India's export, growth and process of diversification, to Japan.

Methodology

The study is divided into two parts based on the composition of India's exports to Japan. In the first part, the study analyses the extent to which India's non-manufactured export was dominating in Japan's foreign trade. Subsequently an assessment is made of some leading issues that arise out of higher weightage from non-manufactured exports to Japan.

In the second part, the study examines the opportunities provided by the Japanese market for import of manufactures from India and the unfavourable factors that had militated against diversification. India's internal barriers, e.g. production efficiency in Indian industries are identified as factors affecting India's manufactured exports to Japan. As the representative of industries of Indian manufacturing sector, cotton textiles (a typical of traditional industry) and handtools industry (modern lines) are picked up for study in detail with reference to their export performance and also a comparison is struck with the industries of developing countries.

Based on the proposition of Akamu's (1962) Ganko Ketai Growth Model, a hypothesis is constructed to substantiate that the decline in production efficiency seriously affected the competitiveness of India's manufactures against the exports from its competitors in the Japanese market.

With the help of the Ganko Ketai Growth Model, the level of industrial development of the manufactures is investigated. This model which is quite similar to Vernon's product cycle model (1986), formulates the process of the catching up and overtaking in an industrial sector of a technologically less advanced country with advanced countries through trade. The entire growth process of the industry of the former is divided into four stages: import stage, import substitution stage, export expansion stage, and re-import stage. In the initial stage of import, the production technology is learned from the imports and the pressure of the domestic demand created, which will give an impetus for setting up the domestic production in the next stage of import substitution.

If the industry is able to expand production to the level needed for export, it enters the third stage namely export promotion. The question whether the industry reaches this stage or not depends on how much the industry can expand production in excess to the production for domestic market. The production expansion is feasible only when large investment is made to establish the economies of scale. However, as soon as the diminishing returns to scale starts to operate the production and efficiency and eventually the level of production are affected. The last stage of re-import is reached when the product starts to be imported so that the decline in the level of production is compensated.

The stage of development of the manufacturing industries of India, Japan and the competitor countries can be identified in terms of Ganko Ketai Growth model. Later based on this model and with empirical evidence, the distinction originated from the difference in competitiveness can be observed from the production efficiency of the industries of India and these countries.

The dynamism of the Ganko Ketai Growth lies in the production efficiency (Yamazawa, 1971). The improvement of competitiveness in the import substitution and the export expansion stages of the Ganko Ketai Growth is a result of an increase in production efficiency accompanying the production expansion, which in turn gives an incentive to further expansion of production and exports. Similarly, decline in production efficiency when an industry passes the peak of expansion in the transit from the export expansion stage to the re-import stage, contributes to the fall in competitiveness of the industry. The difference in the export performance of light industries of India and its competitors in the Japanese market can be interpreted as the difference in competitiveness of the industries among them, arising from the gap in production efficiency.

The production efficiency of an industry can be measured by the production cost of the product which the industry produces. However, measurement of the production efficiency by cost would not be feasible in this study owing to the specifications employed for the product and the classifications of manufactures adopted in the industrial statistics which vary from country to country.

One of the alternative ways of identifying the production efficiency of an industry is to examine the production cost structure of a product produced by the industry. It is assumed here that changes in the production cost structure lead to improvement or deterioration in the production efficiency: the major components of the production cost of an industrial product can be identified in the following way. Since the total value of cost for the given level of output turned out in an industry consists mainly of three factors, cost of labour required for the production, cost by depreciation in capital in the production, and cost of material inputs required for the production which can be expressed as:

$$O_c = WL + rK + nR \dots\dots\dots (1)$$

Where O is the given level of output in quantity terms of the industry; c the cost required per unit of product; w the wage cost per workers; L the total labour employed for the production; r the rate of depreciation cost per unit of (physical) capital; K the amount of capital employed in production in physical terms; n the cost of material inputs per unit; R the total volume of material inputs. Therefore, the cost

per product can be expressed as:

$$c = \frac{w}{O/L} + \frac{r}{O/K} + \frac{n}{O/R} \quad \dots\dots\dots (2)$$

O/L, O/K, and O/R in the equation (2) can be called as labour productivity, output-capital ratio and output-material input respectively. The equation indicates that the production cost of a product is an increasing function of w, r and n, while it is also a decreasing function of O/L, O/K, and O/R. In other words, the production cost of the industrial product consists of three factors

$$c = \frac{w}{O/L} + \frac{r}{O/K} + \frac{n}{O/R} \quad \dots / \dots / \text{ and } \dots, /$$

which can be called as efficiency-wages, efficiency-capital, and efficiency-material cost respectively.

Based on the above factors, the trends in the production cost structure of cotton fabrics and handtools industries in India, Japan, and South Korea are examined in order to find out the production efficiency of the industries of the three countries which produce the products. Among the three major components in the production cost structure, namely efficiency-wages, efficiency-material cost, and efficiency-capital, the former two are critical in determining overall cost of production, as wage and material cost constitute a dominant portion of the total production cost in these industries.

The dominance of wages and material costs in the production cost structure of a product implied that the changes in wages and material cost are more likely to affect the overall production cost structures. Hence, it can be said that the improvement or the deterioration in efficiency-wages and efficiency-material cost is critical to the determination of the overall production efficiency.

Findings

The efficiency wages in the cotton fabrics industry of South Korea registered a steady increase whereas in case of the industry of India and Japan, this factor did not show a positive upward trend. A similar trend was recorded in the case of the handtools industry. Improvement in the efficiency-wages factor was registered in the industry of South Korea and Japan while in the case of India, the factor is observed to be stable or declining.

The efficiency-material cost factor of the cotton fabrics industry of both India and Japan was relatively stable throughout the period.

When the result of the analysis of the production efficiency factors of the cotton fabrics and handtools industries of India, Japan and South Korea is interpreted in terms of Ganko Ketai Growth Model, the following can be pointed out:

1. A decline in competitiveness among various factors of India's manufacturing

industries is attributed to a fall in the production efficiency, which indicates that India's industries were not able to make steady progress in the third stage of export promotion of the Ganko Ketai Growth. The decline in efficiency-wages of Japan's cotton textile industry indicates that the industry reached the peak of expansion and entered the re-import stage of the Ganko Ketai Growth.

2. One of the important factors besides the above which prevented India's industries from steady expansion is its failure to keep the efficiency material cost factor competitive. This shows that India did not utilize the advantage of domestic availability of resources. In the case of India's cotton textile industry, despite its large potential in increasing the production, the supply of raw cotton is not adequate for the demand of the industry. Also, India's handtools industry suffers from a shortage in supply of materials, especially steel for special use. Despite domestic availability of iron ore, the technological level of the industry did not suit the production of the special steel. On the other hand, these two industries of Japan have overcome the disadvantage in resource endowment by improving the output-input ratio. It has been proved to be helpful in keeping the efficiency material most competitive.

India's trade with Japan has been characterized with the former exporting non-manufactures to the latter while importing manufactures from it. A major part of India's non-manufactured exports to Japan consisted of iron ore, frozen shrimps, raw cotton, and vegetable oil cakes. Iron ore, the most important export item to Japan by India during 1950s to 1980s, constituted half to one-third of India's exports to Japan. India's exports of iron ore, however, has faced increasing competition from other countries in the Japanese market such as Australia and Brazil, both of which offer competitive prices due to their efficient loading and handling transportation systems. In addition, the price of iron-ore has also been falling. In the most recent concluded agreement between MMTC and Japanese steel mills the level of exports by India in 1986 would be maintained with an assurance that Japan might import an additional 1.5 million tonnes in 1987, with a five per cent cut in price. On the other hand, it is found that India's export of shrimps is likely to be under supply constraints in the long run. Imports of shrimps from India has been stagnating at the level of US \$225 million since 1983 and further exports are dependent upon development of deep sea-fishing as well as prawn culture. Short-term price fluctuations also have created obstruction to the steady growth of the exports.

From the point of view of stabilization of export earnings in the long run and industrialization through exports, diversification of the export structure by stepping up exports of manufactures is suggested.

Japan's expanding market for manufactures also had provided opportunities for India's exports. However it was observed that India's exports of manufactures such as cotton fabrics and handtools, despite the comparative advantage in cost that Indian industries have with respect to labour, was not able to improve its export competitiveness due to low output per worker offsetting it. India's manufacturing industries should not rely solely on low wages, but rather should raise productivity to enhance industry's competitiveness. Also, in case of cotton fabrics exports, India's cost advantage in raw materials have not been reflected in its competitiveness due to low output-input ratio.

Japan's imports of manufactures steadily expanded following implementation of import liberalization measures in the 1960s and the GSP in the 1970s. In particular, the GSP scheme provided an enlarged market for developing countries to export manufactures to Japan. Those countries among NICs such as South Korea and Taiwan subsequently took this opportunity to expand manufactured exports to Japan, by raising productivity and advantage in low labour cost.

Technology transfer from Japan is useful for increasing exports of manufactures from India, as it could raise the standard of technology used by Indian industries. Another benefit India could have derived by technology transfer would have been the transfer of modern equipment and buy-back agreements, which would have brought about a greater opportunity for two-way trade expansion with the technology-transferring country.

India's industrial collaborations with Japan in the field of manufacturing industries such as cotton textiles and handtools have been very insignificant. As of June 1985, there were only three cases of technology transfer to India in the field of handtools production, while there have been no cases of collaboration in cotton fabrics weaving. The greater industrial cooperation with Japan in these fields by means of technology transfer and investment would help India to expand and diversify exports to Japan.

Education

MANOHAR LAL MAKHJA : LOCATIONAL STUDY OF EDUCATIONAL INSTITUTIONS OF UDAIPUR DISTRICT, University of Udaipur. 1978, *Supervisor* : L.N. Verma

The Problem

THE OBJECTIVES of the study are : (i) to trace their origin of formal educational institutions and their growth in different phases, (ii) to analyse their distributional patterns and spatial arrangements, (iii) to classify them on the basis of management, level, size or number of students enrolled and courses offered, (iv) to analyse the population served by them and to find relationship between enrolment ratios and elements of population and population of S/C and S/T, (v) to analyse the present pattern of physical facilities of movement and their impact on education, (vi) to examine the existing school network and project a more rational future patterns.

The area under study is a political unit known as Udaipur District of 17,267 sq.kms area having 17 tahsils. This area is again divided into five minor sub-divisions on the criteria of physical and human conditions for spatial analysis of educational provisions. These sub-divisions are central, eastern, northern, western and southwest-southern.

Methodology

The data sources were historical documents, district Gazetteers, various administrative reports of Mewar and different types of census (1901-1971) and other reports of the various committees and Commissions on education. Some useful maps

published by Survey of India and the census department were used exhaustively. An extensive field survey was undertaken including visits to 32 centres on the basis of a detailed form 'Educational Center Information Form' which was designed for the collection of data on individual institutions and its relationship to the surrounding area. The simple statistics like coefficient of correlation, coefficient of quality, index values were used. The maps were prepared as basic tools for spatial analysis and planning exercises.

Findings

The origin of formal education in the region is traceable in the latter half of 19th century when first school in the state was started in the year 1863. Later on with the efforts of Missionaries and the Darbar, educational institutions multiplied and by the end of the 19th century the number reached 26. The growth has been dealt in four distinct phases. The first phase starts with the dawn of formal education (1863), and ends at the close of 19th century. The second phase lasted fifty years, 1901-1951. The growth of education was slow because of the lack of interest of the then rulers. By 1951, there were 350 educational institutions in the district imparting education largely up to the primary level. The third phase starts when the national plans for development were taken up and phenomenal expansion in education was the result and the number of institutions had reached 1,118. The last phase of growth in educational institutions belongs to the decade 1961-1971 under the plans of national reconstruction when the number of educational institutions reached up to 1,663.

As far as the distribution is concerned, educational institutions are found unevenly distributed and have been classified into four density grades, and (i) *Areas of sparse density*: These have less than 2 institutions in 25 km² area, comprising 42.6 per cent of the total area of the district. Here the observed mean distance to the nearest neighbour is 4.5 kms. (ii) *The medium density* areas have density of educational institutions between 2 and 4 per 25 km² and cover 49.3 per cent of the total area of the district. Here the mean distance to the nearest neighbour is 3.2 kms. (iii) *The high* and (iv) *Very High density*: have 4 to 6 and above 6 institutions per 25 km² respectively and found in patches e.g. South-Western part of Kherwara tahsil, including a large 'S' type tract lying in the central part, while in very high density there are two areas, namely urban centre of Udaipur and its environs and other lying north-east of it including Nathdwara and Rajasmand. The mean distance among institutions is below 2 km and 0.5 km for the high and very high density areas respectively.

The educational institutions are classified into the four major categories viz; (i) *on the management basis* - Three types namely Government local bodies and private are found in operation in the region. Local body institutions are generally primary level institutions and are distributed in the rural areas forming 90.5 per cent of the total primary level. The number of privately managed institutions forms insignificant number being 3.6 per cent of the total primary school and remaining 5.9 per cent

are managed by the Government in urban areas only. In case of secondary education 17 out of 71 are managed by the private organizations largely in urban areas and 54, 32 are in the central and eastern sub-division. Out of 24 institutions for higher education 8 are privately managed in Udaipur city only. It confirms that private organizations are taking interest in spreading education in urban areas only. Classification is made on the *basis of instruction* viz. Primary, Secondary, and Higher. The highest level is limited to only central sub-division with exception to the eastern sub-division which has only one higher level institution at Dabok. The position of secondary level institutions is again in favour of the central and eastern sub-divisions where 64 per cent of such institutions exist. Primary level institutions are found mostly in southwest- southern division, i.e. 31.8 per cent of the total district. The central sub-division has 27.8 while other parts south-eastern 16.5 per cent, Northern 11.8 per cent, Western 12.2 per cent. Three main classes *by size* of educational institutions are visible; (i) small size institutions (Below 100) out of the total 1,663, 1,279 or 17.1 per cent fall under this small size category. To be more precise 50 per cent of the total have even a smaller size up to 50 pupils. (ii) medium size institutions (100-199)—out of the total 1,663, 355 or 21.1 per cent are classified as medium size institutions. The central sub-division shows nearly 50 per cent. The share of other sub-divisions is SouthWest-Southern 18 per cent, Eastern 15 per cent, Northern 19 per cent and Western 7 per cent. (iii) size of 500 and above institutions are generally confined to the urban centres like Udaipur, Nathdwara, Kankroli, Bhinder and Salumber. Institutions are also classified by *different streams of courses*. Single elective courses are found generally in the rural areas while double elective courses are offered in rural and urban areas. Multi-elective courses are run in urban areas only.

In the present work an attempt has also been made to analyse the population served by educational institutions. It is found that 45.6 per cent of the total student population is distributed in the central sub-division, 23.2 per cent in southwest and southern, 14.9 in Western, 9.5 per cent in Northern, and 6.6 per cent in the western sub-divisions. Out of 1,63,203 pupils 1,19,227 or 75.1 per cent carry their studies in rural areas while 43,976 or 24.9 per cent in urban centres. Nearly 50 per cent of the rural student population is distributed in only six tahsils having better economic conditions and lying mostly in the central and eastern sub-divisions of the region. The remaining 50 per cent of the student rural population is distributed among the eleven tahsils. All the urban student population is confined to six urban centres of Udaipur, Nathdwara, Rajasmand, Bhinder, Deogarh, and Salumber. The city of Udaipur contributes 73.7 per cent of the total urban student population. Total number of inhabited settlements in the district are 3,122 and only 1,330 or 42.30 per cent provide facilities of education. The remaining, 1,792 or 57.7 per cent not having educational facilities are of small sized settlements generally less than 300 population. Primary and secondary enrolment ratios are unevenly distributed. Primary enrolment ratios range from 29.11 per cent to 64.43 per cent. The low enrolment ratios (Below 40) are found in the tahsil of Dhariwal, Kotra, Salumber,

Sarara, Vallabhnagar, and Gogunda while high enrolment ratios (above 50) are found in the central sub-division and adjoining central part of the eastern sub-division. The secondary high enrolment ratios (above 20) are found in only two tahsils like Girwa and Mavli while low enrolment ratios (below 10) are found in whole of the southwest-southern sub-division including the tahsils of Amet, Gogunda, and Kumbhalgarh. All the tahsils covered in this study have coefficient of equality below 100; hence it is inferred that S/C and S/T are far lagging behind the other communities. These categories are obtained in the following areas (a) backward—Amet, Deogarh, Railmagra, (b) Very backward—Girwa, Kumbhalgarh, Mavli, Nathdwara, Rajasmand, Sarara and Vallabhnagar. (c) Extremely backward tahsils are Bhim, Dhariawad, Gogunda, Jhadol, Kherwara, Kotra, and Salumber. Statistically the correlation coefficient between the enrolment ratios and urban population at the tahsil level is obtained as 0.91. This shows high positive correlation for S/C and tribal population is only 0.42. A fair positive correlation between enrolment ratios and population density and literacy are found +0.61 and +0.65 respectively. The relationship between tertiary population than the former two cases, being only +0.45.

The catchment areas have been delimited for all the three levels of education—primary, secondary, and higher education. The service areas are determined by joining the settlements from where students come to that particular centre of education. The settlements providing primary education facility are classified into three different grade sizes, namely (i) below 3 km² catchment areas showing highest proximity to the centre of education. The central sub-division shows highest proximity in the district because of the favourable geographical and economic conditions; (ii) between 3 and 12.5 km² catchment-area showing medium order proximity. This category seems commonest from among the three being above 50 per cent in cases of all the sub-divisions; and (iii) catchment-area above 12.5 km² showing least proximity. The whole of the southwest-southern sub-division falls under this category. Here minimum participation is found largely due to rough terrain and also because of the prevalence of 'Adivasis'. The catchment areas of secondary level institutions have also been categorized in three service-area-groups namely (i) *Service-area below 80 km²*: These areas form the major category having 50 per cent except in the case of southwest southern sub-division. In these areas the participation in education seems low because agricultural labour is much needed and people seem to be disinterested in vocations other than farming. (ii) *Service-area 80-160 km²*: These areas are found in central sub-division (32 per cent), eastern (25.6 per cent), northern (16.3 per cent), western (24.7 per cent), and southwest southern (21.1 per cent). (iii) *Service areas of above 160 km²*: These are found highest (31.7 per cent) in southwest-southern sub-division. The participation in education of this size-group is the highest and there is found a tendency to travel even from distant points to avail the facility of education. *Catchment areas of higher education institutions* show four distinct categories (i) immediate catchment areas are restricted within the district and attract students for higher education exclusively from various parts of the district alone; (ii) contiguous catchment areas include

neighbouring districts of Udaipur like Chittorgarh, Bhilawara, Dungarpur, and Banswara, (iii) regional catchment areas have their sources within the entire region of Rajasthan and extra-regional catchment area include pupils from different parts of India like U.P., M.P., Delhi and Kerala and even out of India like Ceylon (Sri Lanka), Burma, Indonesia, Mauritius, etc.

The nature of accessibility was examined on the distance of institutions from the road or railway. The institutions which fall within the 2 kms range either from road or railway are considered most advantageous and such institutions form 64 per cent of the total institutions in the district. In this respect the various sub-divisions show central 79 per cent, eastern 77 per cent, northern 86.5 per cent, western 76.5 per cent, and southwest-southern 50 per cent. Institutions lying 2-5 kms show the areas central 16 per cent, eastern 23 per cent, northern 13.7 per cent, western 22.4 per cent, and southwest-southern 30 per cent of their total. Institutions lying 5-10 kms range show the areas such as central 5 per cent, Eastern Nil, Northern Nil, western 4 per cent southwest-southern Nil, of their total. Institutions lying above 10 kms range are found in the southwest-southern sub-division and their number is 7 only. The rest of the sub-divisions show, Nil in this accessibility grade. The impact of mobility and communication as derived by the index-values shows that Girwa tahsil ranks first, and as such, it shows close relationship between means of mobility and communication and location of various types and orders of institutions in the district.

The future patterns : The future locations of new schools was based on locational principles emphasizing demand or threshold, distance among various service-centres, their size, so that equal educational opportunities be provided to all irrespective of caste, creed, religion and political bias. In case of primary education all villages with 300 population should be facilitated by an educational institution. Those villages which would reach 300 population by 1981 may also be given a school. Similarly a map for existing secondary level institutions and institutions envisaged in 1981 was prepared on the basis of 2,000 threshold population.

JAIPAL SINGH TARANG : DEVELOPING INSTRUCTIONAL STRATEGIES FOR TEACHING HINDI AS A SECOND LANGUAGE TO URDU MEDIUM STUDENTS, Jāmia Millia Islamia, 1979, *Supervisor* : B.Sen Gupta.

The Problem

The work is an attempt to identify certain aspects of Hindi language structures, on the basis of an analysis of the language design and language description, for which special instructional strategies and learning situations could be planned in a manner that Urdu medium students were able to discover the regularities of correspondence between acts of speech and behavioural antecedents. Alternately the terminal

behaviour was identified to be the achievement of complementary level as the minimal and the equative level as the maximal limits of the instructional objectives for teaching Hindi as a second language to Urdu medium students. To control and guide the teaching learning situations to achieve these objectives the different aspects of Hindi attainments were identified.

Hypotheses

On the basis of a study of the language design and language description of both Hindi and Urdu languages and review of related studies the following hypotheses were formulated for the investigation.

1. In spite of the fact that Hindi medium and Urdu medium students have to learn more or less the same higher order structures in Hindi yet the Urdu medium students fail to achieve the desired level of communication compared to Hindi medium students.
2. Hindi language has certain higher order structures with which an Urdu medium student has to cope with *de novo* at the school medium and discipline medium level of Hindi language and that these higher order language structures, are, therefore, characteristic aspects of Hindi language not related to mass media level or social interaction situations.
3. Urdu medium students who learn Hindi as a second language, therefore, can acquire communication competence and semantic control in Hindi equivalent to that of Hindi medium students provided special instructional programme for higher order language structure and characteristic aspects of Hindi language are formulated and conducted for Urdu medium students.

Methodology

The following tests were developed to provide measures in Hindi language attainment.

1. Vocabulary: (a) Synonymity; (b) Anonymity; (c) Relational Opposites; (d) Word/Grouping (Synonymous Groups); and (e) Word Classification (Grammatical)
2. Spellings: (a) Identification; (b) Discrimination; and (c) Production
3. Punctuation
4. Formal Grammar: (a) Gender; (b) Samas (Compounding); and (c) Sandhi (Morphophonemic Changes)
5. Applied Grammar
6. Derivational Structure: (a) Prefix; (b) Anomalous Derivational Structure; (c) Change of Phrase into a word
7. Stylistic Transformation and Alteration; (a) Production of Semantics Equiva-

- lent at Word Formation Level (Word Formation); and (b) Stylistic Alternations
8. Contextual Meaning at Word Level: (a) Word Usage; (b) Production of Semantic Equivalent at Word Level
 9. Contextual Meaning at Sentence Level; (a) Comprehension of Semantic Equivalent at Sentence Level; and (b) Word Order in Sentence
 10. Compositional Sequencing
 11. Contextual Meaning at Passage Level
(Comprehension and Expression)

Construction of Tools

The content of the tests was based on the higher order language structures of Hindi which were identified characteristic aspects of Hindi for Urdu medium students. The selection of the content was made from the Hindi textbook used by VII grade Hindi medium and VIII grade Urdu medium students. The textbooks of both these groups were the same.

The walled city of Delhi was the area selected for the investigation. Eighty-two per cent of Urdu speakers living in Delhi State live in this area. All the six Urdu medium Boys' Higher Secondary Schools are situated in this area. This is the area where both the groups of people (Hindi speakers and Urdu speakers) use a common language in their day-to-day interaction, and both belong to a common socio-cultural background.

On criteria worked out for the selection of Hindi medium schools the following schools were selected for try-out test administration. The VII class students, who have regular attendance at seventy per cent, who have passed the last examination and who belong to the walled city locality were selected for the administration of try-out test.

1. Common Higher Secondary School, Daryaganj.
2. Anglo-Sanskrit Higher Secondary School, Daryaganj.
3. Ramjas High Secondary School, Sita Ram Bazar.

Item Analysis

Proportion of correct response to an item, corrected for guessing according to Guilford's formula was used for calculating difficulty value. The discrimination value was calculated by using the precision method adopted by Moray House and U.P. Manovigyan Shala Tests. The items were selected on the basis of their difficulty value ($E1/3$ index). Selected items were used in the Final tests for the Hindi language achievement survey.

Survey of Hindi Language Achievement

The Sample

Four schools from among six Urdu medium schools in the walled city were selected.

Two schools, recently upgraded to Senior Secondary, were dropped as the facilities compared to other secondary schools were not equivalent. On considerations and criteria developed for the selection of schools four neighbouring schools from among the Hindi medium schools and Urdu medium schools were selected for the Hindi language achievement survey.

Urdu Medium Schools

1. Anglo-Arabic Higher Secondary School, Ajmeri Gate.
2. Fatehpuri Muslim Higher Secondary school, Fatehpuri.
3. Mazharul Islam Higher Secondary School, Farrash Khana
4. Shafiq Memorial Higher Secondary School, Bara Hindu P. o.

Hindi Medium Schools

1. Commercial Higher Secondary School, Darya Ganj.
2. Shri Mahabir Jain Higher Secondary School, Nai Sarak.
3. Shri L.N. Girdharilal Hr. Secondary School, Khari Baoli.
4. Ramjas Higher Secondary School, Sitaram Bazar.

Since the selection of total population to which the tests referred to was not justifiable and selection of a theoretically correct representative sample had practical difficulties, a compromise was made between need arising out of the theoretical assumption and practical necessity. The technical details about the sample led to use of R.A. Fisher's test of significance, the F-ratio, which was designed to tell whether sets of data were sufficiently different from one another to reject the hypothesis that they belong to the same population. Alternately t-test of significance of difference between means of two groups helped in ascertaining heterogeneity of the composite population. The F-ratio followed by t-test helped the author to identify samples from a homogeneous population which would be treated as representative of Urdu medium and Hindi-medium school children.

Findings

The F-ratio results showed that all the F-ratios are significant at 0.01 level and except in case of one variable—punctuation, all the other F-ratios were significant at 0.05 level. Thus the eight groups of students could not come from the same population. In order to identify homogeneous groups of Hindi medium and Urdu medium students t-test were conducted. On the basis of t-test it was found that in case of two Hindi medium schools—Commercial Higher Secondary School and Ramjas Higher Secondary School—the difference between the mean achievements of students was not significant in all the eleven variables at 0.05 level. The fact that the mean achievements in the case of all the eleven variables were not significant at 0.05

level provided a fair sample of 115 students (around 57.50 per cent) which could be presumed to be representative sample of Hindi medium students within the walled city of Delhi. Similarly, in case of three Urdu medium Higher Secondary Schools — Shafiq Memorial Higher Secondary School, Fatehpuri Muslim Higher Secondary School, and Mazharul- Islam Higher Secondary School — the mean achievement of students on majority of variables was found to be not significant at 0.05-level. The fact that the mean achievement in case of majority of variables are not significant at 0.05 level provided a fair sample of 130 students (around sixty-five per cent) which can be presumed to be a representative sample of Urdu medium students within walled city of Delhi.

The mean achievement of sample of Hindi medium and Urdu medium school students were subjected to t-test, which led to the following conclusions

1. The difference in mean achievement of students belonging to Hindi medium groups as compared to those of Urdu medium groups show that Hindi medium students have done better in case of vocabulary, spelling, contextual meaning at word level, formal grammar, derivational structure, applied grammar, contextual meaning at sentence level and at passage level.

2. Shafiq Memorial Higher Secondary School group of Urdu medium students have done equally well as compared with the Hindi groups in punctuation, but Mazharul- Islam Higher Secondary School group has done better than both the Urdu medium and the Hindi medium groups in case of punctuation. This comparison revealed a fact that punctuation is a sentence governed convention and Hindi medium or Urdu medium students belong to this convention and that there is no proper formal training imparted to these students. It is almost axiomatic with them, when they write Hindi or Urdu, that punctuation is used at the end of the sentence. The punctuations within the sentence are beyond both the groups.

3. In case of stylistic transformation (word formation) and stylistic alterations Shafiq Memorial Higher Secondary School and Mazharul Islam Higher Secondary School groups of students have done better than those of both the Hindi medium groups. Fatehpuri Muslim Higher Secondary School group of Students has done equally well as compared to both the Hindi medium groups.

This reveals a fact that Urdu medium students tend to make cognition of distinctions between Hindi lexical items and Urdu lexical items, between Hindi morpheme and Urdu morpheme, while Hindi medium students do not make such distinctions while making lexical alterations or morphological alternations and at transformations at word formation level. This is so perhaps because Urdu medium students identify the so called Hindi lexical structure and morphological system as Hindi ones especially because of their use in mass-media material and common language transactions. It is because of this that Hindi medium students do not make correct and proper Hindi alternations for the Urdu words in a sentence and, thus, achieve either equally well or sometimes lag behind Urdu medium students.

4. In case of compositional sequencing Shafiq Memorial School and Fatehpuri

Muslim Higher Secondary School groups of students have done equally well with both the groups of Hindi medium students.

In compositional sequencing the language content did not require higher order language structures of Hindi language. This is so because the language used in this test was that of mass-media level. Thus compositional sequencing shows that both the Hindi medium and Urdu medium groups of students are more or less equivalent in terms of their compositional competence in sequencing. It is due to more or less common style of writing essays at the school medium level and transfer effects that have helped the Urdu medium students to achieve as much as Hindi medium students or sometimes better on this variable.

5. Except in case of punctuation, compositional sequencing and stylistic transformations and alternations, the difference in mean achievement of students belonging to Urdu medium and Hindi medium groups show that Hindi medium groups have done constantly better than Urdu medium groups in case of eight variables namely vocabulary, spelling, formal grammar, applied grammar, derivational structure, contextual meaning at word level, sentence level, and passage level. All these eight variables consist of those higher order language structures and characteristic aspects of Hindi language which are not commonly used at the mass-media level and below, and are characteristic of school medium or discipline medium level of Hindi language.

In view of the fact that the Urdu medium students fail to achieve the level achieved by Hindi medium students, Hypothesis-I, 'In spite of the fact that Hindi medium and Urdu medium students have to learn more or less the same higher order structures in Hindi, yet the Urdu medium students fail to achieve the desired level of communication competence and semantic control in Hindi as compared to Hindi medium students' is, therefore, empirically established.

In view of the fact that the groups of Urdu medium and Hindi medium children selected from the Walled City area of Delhi, wherein they are exposed to common mass-media level of language transactions and common socio-cultural interaction situations, are not equivalent in their achievement of higher order Hindi language structures. Urdu medium students' low achievement is because that they have to cope with *de novo* at the school medium and discipline medium level of Hindi language, Hypothesis -II 'Hindi language has certain higher order structures with which Urdu medium students have to cope with *de novo* at the school medium level and discipline medium level of Hindi language and that these higher order language structures are, therefore, characteristic aspects of Hindi language not related to mass media level or social interaction situations' has been empirically established.

These results were indeed a surprise to the author. In spite of his experience in teaching Urdu medium students for the last fifteen years or so, and his hunch on the basis of this experience that Urdu medium students would be found wanting in a few aspects of higher order language structures of Hindi for which instructional strategies could be worked out, the empirical results surpassed all his guesses. This

was indeed a difficult situation inasmuch as instructional strategies for these eight variables, which in turn represented eighteen high order language structures of Hindi was indeed a Herculean task. The author, therefore, decided for the sake of parsimony to adopt the alternate procedure of factor analysis to identify a limited number of reference capabilities which would account for variation in the Hindi achievement and then to select one of the most prominent one for which an instructional programme could be experimentally tried out.

Factor Analysis

The scores of twenty-two variables were punched on the I.B.M. cards separately for Hindi medium and Urdu medium students and the mean, standard deviation correlation matrix and subsequent extraction factor rotation according to Varimax products conducted separately for each group of Urdu and Hindi, in the Delhi University Computer Centre on the electric computer-I.B.M. using the S.P.S.S. process.

After the calculation of inter-correlation matrices, six factors were extracted for Urdu medium students and seven factors for Hindi medium group. The factor loading for various factors were gleaned in a tabular form to facilitate the interpretation of results. The factors in case of Urdu medium and Hindi medium students were tentatively identified as follows:

- Factor A : production of Morphological System.
- Factor A1 : Production of Morphological System by Transformation.
- Factor A2 : Production of Morphological System by Discrimination.
- Factor B : Cognition of Lexical Relations.
- Factor B1 : Cognition of Lexical Relations on the Basis of Opposite Relations.
- Factor B2 : Cognition of Synonymous Lexical Relations.
- Factor C : Production of Grapheme-Phoneme Relations.
- Factor C1 : Identification of Lexical Units on the Basis of Grapheme-Phoneme Relations.
- Factor C2 : Production of Lexical Unit on the Basis of Phoneme-Grapheme Relations.
- Factor D : Cognition of Compositional Classes.
- Factor E : Cognition and Production of Semantic Relationship.

Factor A, Factor C, Factor D, and Factor E have merged as a single factor in case of Urdu medium groups. Factor B, Factor D, and Factor C have merged as single factor in case of Hindi medium students.

In case of Urdu medium groups Factor B has further differentiated into Factor B1 and Factor B2 whereas in case of Hindi medium groups Factor A and Factor C have differentiated into Factor A1, Factor A2, Factor C1, and Factor C2.

Language Structure Identification for Instructional Programme

The operations involved in marker tests in case of Urdu medium and Hindi medium groups were used for the identification of the Morphological system, in case of Urdu medium students and Factor A1 — Production of Morphological System by Transformation, and Factor A2 — Production of Morphological system by Discrimination, in case of Hindi medium students emerged as one of the important reference ability to account for overt accomplishment in most significant area of Hindi language, i.e. that of morphological system. On the basis of this reference ability the instructional programme on derivational structures, which had highest loadings on Factor A and Factor A2 was formulated and instructional strategies and experimental programme were devised.

Developing Instructional Strategies

The 'learning by discovery' and 'inquiry training' were the methodological approaches used for developing instructional strategies. These approaches articulated under 'guided discovery' approach were used to develop the instructional programme. The instructional programme was developed after identifying various levels of capabilities, and prerequisites to achieve these capabilities, as well as the various levels of semantic control for communication competence that these capabilities and prerequisites would help in acquiring. The final differentiation of prerequisites and capabilities was made as follows

1. a. Prefixal Lexical Item Capability
1. b. Suffixal Lexical Item Capability
2. prefixal-Suffixal Lexical Item Capability
3. Morphophonemic Change and Suffixal Lexical Item Capability.

The Instructional Objectives

The instructional objectives in terms of behavioural specifications were worked out and on the basis of task analysis, the terminal behaviour that Urdu medium students were to acquire after the instructional activity were decided and used in developing the instructional material.

Instructional Material

To achieve the objects, selection strategies were worked out to select instances, order them and present them in proper and correct sequence so that the instructional material could be articulated with methodical requirements on the one hand and lead

to accomplishment of capabilities on the other. Thus unit-wise material was collected in four units, to provide opportunity to Urdu medium students to learn production of morphological system and acquire semantic control. This material was arranged in a work-book, prepared for the purpose of conducting the experimental programme to try out the instructional strategies.

Experiment:

Selection of Sample

Fatehpuri Muslim Higher Secondary School and Mazharul Islam Higher Secondary School were selected from amongst Urdu medium schools for the purpose of experimental tryout on the basis of earlier analysis. The vocabulary Test was administered on the students of both these Urdu medium schools. Both the groups of Urdu medium schools were found equivalent in their achievement of Hindi vocabulary, i.e. mastery of lexical structures — a prerequisite for the present experimental study. Mazharul Islam Higher Secondary school was selected as the experimental group by toss of coin and Fatehpuri Muslim Higher Secondary School was selected as control group. Ramjas Higher Secondary school was selected from amongst Hindi medium schools as a Cross-Control group on the basis of earlier analysis.

Construction of Pre-Test and Post-Test

The pre-test and post-test were constructed by dividing the available tests into two parallel tests. The pre-test was given to experimental Urdu medium group and control Urdu medium group of students on a day earlier than the experimental programme started.

Instructional Programme

The instructional programme was conducted from 13 October to 1 November 1978, i.e. for a period of sixteen working days according to 'guided discovery' instructional strategies on the basis of behaviour specifications identified for each unit of the instructional material included in the work-book. After the completion of the instructional programme the post-test was administered on all the three groups, namely experimental Urdu medium group, control Urdu medium group, and cross-control Hindi medium group of students. The experimental programme was completed on 1 November 1978 and the post-test was given on 2 November 1978. The conclusions reached on the basis of achievement in derivational structure of higher order Hindi language in case of three groups are given below :

1. The experimental Urdu medium and Control Urdu medium groups were found to be equivalent and belonging to a homogeneous population of Urdu

- medium students as far as their achievement in derivational structures at the pre-test was concerned.
2. After the treatment the experimental Urdu medium group has shown higher achievement in derivation structures as compared to both the control Urdu medium, and cross-control Hindi medium groups. The experimental Urdu medium has done better as compared to control Urdu medium group, the difference between the mean achievement being highly significant at 0.05 level. The cross-control Hindi group has lagged behind the experimental group and the difference of mean achievement is significant at 0.05 level.
 3. The instructional strategies under 'guided discovery' and inquiry training showed better results in the achievement of higher order language structure of Hindi as compared to traditional methods or strategies followed in the schools. Thus the hypothesis 3, "Urdu medium students who learn Hindi as second language can acquire communication competence and semantic control in Hindi equivalent to that of Hindi medium students, provided special instructional programme for higher order language structures and characteristic aspects of Hindi language are formulated and conducted to Urdu medium students", is empirically established.

MANDLIK PRAHLADRAY CHHAYA, AN INQUIRY INTO THE ACHIEVEMENT IN PHYSICS OF PUPILS OF CLASS 8TH AND 10TH OF SCHOOLS BELONGING TO THE KENDRIYA VIDYALAYA SANGATHAN, INDIAN SCHOOL CERTIFICATE BOARD AND PRIVATE HIGHER SECONDARY SCHOOLS AFFILIATED TO THE ALL INDIA HIGHER SECONDARY BOARD, DELHI, University of Bombay 1978, *Supervisor* N.N.Shukla.

The Problem

The Public Schools in India are affiliated to two different examining bodies, namely the Central Board of Secondary Education and the Council of Indian School Certificate Examination. The Kendriya Vidyalaya form one system of schools, the public schools affiliated to Central Board of Secondary Education form second system of schools and the schools affiliated to the Council of Indian School Certificate Examination form the third system of schools for the purpose of this study.

Objectives

The major objective of the study is to make a comparative study of the achievement in Physics of students of class VIII and class X studying in schools belonging to the three different school systems mentioned earlier.

For the attainment of the primary objective, the secondary objectives of the study are :

1. to make an analysis of the content in physics in the educational programmes for classes VIII and X of the three school systems;
2. to construct and standardize an achievement test in physics for class VIII and class X
3. to make a comparative study of the achievements in physics of boys and girls taken from the three school systems of class VIII and class X.

Hypotheses

The following two hypotheses are formulated for examination in this study :

1. There is no significant difference in the achievements in physics of pupils of class VIII of schools belonging to (i) the Kendriya Vidyalaya Sangathan, (ii) the Central Board of Secondary Education, and (iii) the Council of Indian School Certificate Examination.
2. There is no significant difference in the achievements in physics of pupils of class X of schools belonging to (i) the Kendriya Vidyalaya Sangathan, (ii) The Central Board of Secondary Education, and (iii) the Council of Indian School Certificate Examination.

Methodology

4. Sample

The sample consists of pupils selected at random from all the schools belonging to the three school systems located in the four metropolitan cities - Bombay, Calcutta, Delhi, and Madras. Two hundred students have been taken at random from schools belonging to each of the three school systems (classes VIII and X). The total sample consists of 600 pupils of class VIII and equal number of pupils of class X.

Research Tools

The tools specially prepared for the purpose of this investigation are the standardized tests of achievement in physics for class VIII and for class X. Percentile norms, standard score norms, and T-Score norms have been calculated for these tests. The reliability of these tests have been established by using split-half method and the use of Spearman - Brown formula. The reliability coefficient for class VIII test is 0.903 and that of class X test is 0.897.

For the examination of the hypotheses 'T' test has been used.

Findings

1. There is no significant difference between the mean achievements in physics of pupils of class VIII belonging to Kendriya Vidyalaya and the public schools affiliated to Central Board of Secondary Education.

2. The mean achievement in physics of pupils of class VIII of Kendriya Vidyalaya is more than that of the pupils of schools affiliated to the Council of Indian School Certificate Examination. The difference between the two mean achievement scores is significant at 0.01 level.

3. The mean achievement in physics of pupils of class VIII of the public schools affiliated to the Central Board of Secondary Education is significantly more than that of pupils of the schools affiliated to the Council of Indian School Certificate Examination. This difference is also significant at 0.01 level.

4. There is no significant difference between the mean achievements in physics of pupils of class X belonging to Kendriya Vidyalaya and the public schools affiliated to the Central Board of Secondary Education.

5. The mean achievement in physics of pupils of class X of Kendriya Vidyalaya is more than that of the pupils of schools affiliated to the Council of Indian School Certificate Examination. The difference between the two mean achievement scores is significant at 0.01 level.

6. The mean achievement in physics of pupils of class X of the public schools affiliated to the Central Board of Secondary Education is significantly more than that of the pupils of the schools affiliated to the Council of Indian Schools Certificate Examination. This difference is also significant at 0.01 level.

KRISHNA KUMAR SHARMA : EFFECT OF DIFFERENT TECHNIQUES OF FEEDBACK UPON THE ATTAINMENT OF TEACHING SKILLS RELATED TO STIMULUS VARIATION AMONG TEACHERS, M.S University of Baroda, 1977, *Supervisor*: B.K.Passi.

The Problem

It is an experimental study pertaining to the area of teacher behaviour in the context of student teaching in teacher education. This study was conducted in two phases—the pilot and final phases.

Methodology

The pilot study, having single group design, was conducted on a sample of eighteen B.Ed. students enrolled at the Faculty of Education and Psychology, M.S. University

of Baroda. Treatment was given by supervision, peer and self as sources of feedback in microteaching. The two teaching skills, namely reinforcement and silence and non-verbal cues were the dependent variables. Controlling variables were the age, sex, previous teaching experience, and methods of teaching offered at the B.Ed. level.

Final study, having pretest-post-test parallel group design, was conducted on a sample of thirty-two B.Ed. students out of 200 students enrolled at D.A.V. College of Education, Abohar, Punjab for the session 1974-75. The treatment variables were: discussion, oral and written techniques of feedback. The dependent variables were three skills related to stimulus variation, namely body movement, gestures and shifting sensory channels. The controlling variables were the age, sex, qualifications, percentage of marks and methods of teaching offered at the B.Ed. level. Tools used in study were: general teaching competence observation schedule (GTCOS), three lesson evaluation proformas one for each skill attitude scale towards microteaching, self evaluation proforma, and free response proforma.

DESIGN OF THE STUDY

Pretest on General Teaching Competence

Microteaching Simulation (Laboratory State)			Microteaching Real School stage
(E1) sample ST-8 PS-2	(E2) sample ST-8 PS-2	(E3) sample ST-8 PS-2	Central (C) ST-8 CS-1
Treatment Skills-3 (i) B.M. (ii) G (iii) S.S.C. Tech FB (i) Discussion Oral Written	Treatment Skills-3 B.M. G S.S.C. Tech of F.B.	Treatment Skills-3 B.M. G S.S.C. Tech FB	Treatment Skills-All mentioned GTCOS Tech of F B GLOBAL Qualitative

Post- test on General Teaching Competence

E1= Experimental	(1) ST- Student Teacher B.M.Body Movement
E2= Experimental	(2) PS- Supervisor G-Gestures
E3= Experimental	(3) ssc-Shifting Sensory channels

Findings

1. Out of three techniques of feedback, discussion is the most effective technique of providing feedback by the peer supervisors for the skills of body movement.

2. Writing feedback is the most effective technique for providing feedback by peer supervisors for the skills of shifting sensory channels.
3. For the skill of shifting sensory channels- total shifts in events, oral feedback is better than discussion feedback, discussion is least effective in this case.
4. There is no differential effect of three techniques of feedback upon the attainment of the skill of gestures.
5. There is practice effect of lessons, on the gradual improvement in performance of the skills, namely body movement gestures and shifting sensory channels and no improvement in the case of shifting sensory channels related to total record in events.
6. The peer rating of his colleague's performance on the skills of body movement and gestures always differ from the self (microteacher), and the peer rating always remains at a lower level than of the self.
7. Training Microteaching developed positive attitude towards microteaching programme among the students teachers.
8. Microteaching is more effective a technique for transfer of general teaching competence to classroom teaching than the conventional practice teaching.
9. Microteaching is an effective and economical, component skill approach for teacher training.

G. SUBRAMONIA PILLAY: EFFECT OF PATTERNS OF TEACHING UPON CREATIVE THINKING AMONG ADOLESCENTS
M.S.University of Baroda 1978, *Supervisor*: B.K.Passi.

The Problem

The study is aimed at testing the effectiveness of Creative Teaching Method consisting of two techniques of developing creative thinking among the school students. These techniques are: (i) Morphological analysis developed by Zwicky (1969) and (ii) Brainstorming developed by Osborn (1951).

Objectives

The objectives of this study are: (i) to find out the effect of Creative Teaching Method upon the general creative thinking of eighth graders, (ii) to find out the effect of the Creative Teaching Method upon creative thinking in Geography of eighth grades and (iii) to find out the effect of the Creative Teaching Method upon the achievement in geography of eight graders.

Hypotheses

The following null hypotheses were formed.

1. There is no significant difference in general creative thinking ability between the group taught through the Creative Teaching Method and the group taught through the traditional method.
2. There is no significant difference in cognition abilities in geography between the group taught through the Creative Teaching Method and the group taught through the traditional method.
3. There is no significant difference in memory abilities in geography between the group taught through the Creative Teaching Method and the group taught through the traditional method.
4. There is no significant difference in divergent production abilities in geography between the group taught through the Creative Teaching Method and the group taught through the traditional method.
5. There is no significant difference in convergent production abilities in geography between the group taught through the Creative Teaching Method and the group taught through the traditional method.
6. There is no significant difference in evaluation abilities in geography between the group taught through the Creative Teaching Method and the group taught through the traditional method.
7. There is no significant difference in creative thinking in geography between the group taught through the Creative Teaching Method and the group taught through the traditional method.
8. There is no significant difference in achievement in geography between the group taught through the creative Teaching Method and the group taught through the traditional method.

Methodology

The study was conducted in three phases: (i) the pilot study, (ii) the test construction study, and (iii) the final study. The experimental design schematic form is given in Table 1.

TABLE 1
SCHEMATIC PRESENTATION OF THE EXPERIMENTAL DESIGN

Three covariates:	i. Socio-economic status
	ii. Intelligence
	iii. General Creative Thinking

Experimental Group N-35

Treatment variable:
Lessons through Morphological
analysis plus Brainstorming ,
plus traditional method for
four months,

Central Group N-36

Treatment variable:
Lesson through traditional
method for four months

Criterion variables:

- i. General creative thinking
- ii. Creative thinking in geography
- iii. Achievement in geography.

Achievement in geography was measured at
three intervals of 11 lessons' duration in each
case)

The pilot study was conducted to find out the feasibility and to design the Creative Teaching Method suitable to average classroom situations. An English medium school, (Navarachana High School) was selected for the pilot study and the investigator taught geography through the Creative Teaching Method for two months to seventh and eighth grades during November, December 1974 and January 1975. The experience gained was made use of as guidelines for the final study.

In order to measure the creative thinking in geography and achievement in geography of eighth graders, a Geography Achievement Test on Structure of Intellect Model, and three Achievement Tests in Geography were developed.

The final study employed a multifactor covariance design having experimental and control groups. The three covariates were SES, intelligence, and general creative thinking . The criterion variables were general creative thinking in geography, and achievement in geography of eighth graders. The treatment variable in the study was teaching geography through Creative Teaching Method.

The data related to the three covariates and the criterion variables were collected from two groups of eighth grade English medium students of Vellore town, namely (i) Vochrees High School, Vellore, and (ii) Krishnaswamy Mudaliar High School, Vellore. The investigator gave 33 lessons (units of teaching) selected from the geography book prescribed by the Tamil Nadu Government, for eighth grade pupils to the experimental group of which 15 were given through the Creative Teaching Method. The experiment was conducted during August 1975 to December 1975.

Tools

For the study two types of tools were used . They were (i) tools already standardized, and (ii) tools developed for the purpose of this study. The ready-made standardized tests used in this study were, (i) the Kuppaswamy Scale, (ii) the Madhookar Patel intelligence test and (iii) the Passi Test of Creativity (verbal), for

collecting the data of all the covariates and the criteria of general creative thinking of eighth graders.

To measure the creative thinking in geography a Geography Achievement Test on Structure of Intellect Model was constructed on the lines of Guilford's Structure of Intellect Model (1956) (GATSI). In this test, items for testing the semantic content of geography for all the five operations and six products of the S.I. model (30 mental abilities) were included. The test construction consisted of two parts: (i) item analysis study, and (ii) reliability and validity study. For the purpose of item analysis study the investigator selected four English medium schools, two each from the city of Baroda and Madras. The preliminary draft of GATSI was administered and data were gathered from 200 eighth grade students of the four schools, namely (i) Baroda High School, Baroda (ii) Vidyakunj High School, Baroda, (iii) Central School, Guindy, Madras and (iv) Rani Mayyammai High School, Adyar, Madras.

For reliability and validity study, a sample of 60 eighth graders 30 each from Baroda High School, Baroda and Central School, Guindy, Madras was selected. The split-half reliability and the concurrent validity of the test were 0.92 and 0.52 respectively.

Three achievement tests in geography, were developed to measure the achievement in geography of the eighth graders. Since the investigator wanted to see the effect of the treatment at different periods of the experiment three achievement tests were necessary. Sample for the item analysis and reliability and validity were selected from the above two schools. The test retest reliability and the concurrent validity of achievement Test I in Geography are 0.78 and 0.51 respectively. The same for achievement Test III are 0.65 and 0.49.

Analysis and Results

To test the hypotheses, the collected data were mainly analysed by applying the multiple analysis of covariance technique (Snedecor and Cochran 1956). Another technique used for analysis was t-test. It has been used to compare the mean subscores of general creative thinking, creative thinking in geography, and achievement in geography for the two groups separately.

Findings

TABLE 2
HYPOTHESES AND ANCOVA RESULTS

No	Hypotheses	Adjusted means		F-ratio
		Control group	Exp group	
1	There is no significant difference in general creative thinking ability between the group taught through the traditional method and the group taught through the Teaching method.	55.92	50.44	2.53

II	There is no significant difference in cognition abilities in geography between the group taught through the Creative Teaching Method and the group taught through the traditional method.		7.65	7.38	0.12
III	There is no significant difference in memory abilities in geography between the group taught through the Creative Teaching Method and the group taught through the traditional method.		8.02	8.64	1.42
IV	There is no significant difference in divergent production abilities in geography between the group taught through the Creative Teaching Method and the group taught through the traditional method.		13.02	15.22	2.50
V	There is no significant difference in convergent production abilities in geography between the group taught through the Creative Teaching Method and the group taught through the traditional method.		10.67	12.73	4.19*
VI	There is no significant difference in evaluation abilities in geography between the group taught through the Creative Teaching Method and the group taught through the traditional method.		9.90	10.28	0.23
VII	There is no significant difference in creative thinking in geography between the group taught through the Creative Teaching Method and the group taught through the traditional method.		49.35	54.32	2.40
VIII	There is no significant difference in achievement in geography between the group taught through the Creative Teaching Method and the group taught through the traditional method	Test I	44.87	59.92	5.16**
		Test II	42.38	52.28	8.71*
		Test III	37.22	40.68	1.06

* significant at 0.05 level
**significant at 0.01 level

TABLE 3
HYPOTHESES AND t-TEST RESULTS

No	Hypotheses	Sub	Control gr.		Experimental gr.		t-value
			Mean	SD	Mean Parts	SD	
I	There is no significant difference in general creative thinking ability between the group taught through the Creative teaching method and the group taught through the traditional method.	SPAT	9.97	8.22	10.68	4.28	0.45
		UUAT	25.30	10.13	25.17	13.26	0.04
		CAT	17.41	10.63	18.02	7.74	0.27

II. There is no significant difference in cognition abilities in geography between the group taught through the Creative Teaching Method and the group taught through the traditional method.	CMU	0.16	0.44	0.85	0.97	3.85
	CMC	1.91	0.28	1.82	0.45	0.98
	CMC	1.30	0.78	1.74	0.56	2.69
	CMC	1.72	1.59	1.34	1.66	0.98
	CMT	1.77	1.82	1.14	1.51	1.59
III. There is no significant difference in memory abilities in geography between the group taught through the Creative Teaching Method and the group taught through the traditional method.	CMI	0.61	0.68	0.68	0.71	0.44
	MMU	0.63	0.76	0.88	0.67	1.44
	MMC	1.38	0.72	1.34	0.68	0.27
	MMR	0.94	0.63	1.05	0.72	0.70
	MMS	1.13	1.29	1.57	1.26	1.42
IV. There is no significant difference in divergent production abilities in geography between the group taught through the Creative Teaching Method and the group taught through the traditional method.	MMT	1.88	0.31	1.60	0.77	2.06*
	MMI	1.91	0.36	2.28	0.78	1.53
	DMU	3.44	2.27	3.37	2.26	0.13
	DMC	3.44	1.62	3.45	1.31	0.03
	DMR	0.55	1.05	1.05	1.58	1.57
V. There is no significant difference in convergent production abilities in geography between the group taught through the Creative Teaching Method and the group taught through the traditional method.	DMS	1.77	1.51	2.08	1.46	0.87
	DMT	1.80	1.07	2.05	1.28	0.71
	DMI	1.69	2.09	3.51	2.97	2.98*
	NMU	0.86	0.89	1.34	0.83	2.33*
	NMC	1.88	2.06	3.08	2.70	2.09*
VI. There is no significant difference in evolution abilities in geography between the group taught through the Creative Teaching method and the group taught through the traditional method.	NMR	0.63	0.72	0.85	0.69	1.29
	NMS	4.75	1.77	5.37	1.45	1.60
	NMT	0.83	1.48	0.68	1.34	0.53
	NMI	1.41	1.62	1.80	1.76	0.95
	EMU	1.63	0.79	1.65	0.63	0.10
VII. There is no significant difference in creative thinking in geography between the group taught through the Creative Teaching Method and the group taught through the traditional method.	EMC	1.19	0.78	1.31	0.67	0.68
	EMR	0.50	0.69	0.94	0.87	2.36
	EMS	2.88	1.32	2.91	1.40	0.07
	EMT	1.88	0.31	1.65	0.68	1.89
	EMI	1.61	1.77	1.94	1.71	0.80
Total of the results from hypotheses 2 to 6		48.30	17.57	55.40	16.50	1.75
VIII. There is no significant difference in achievement in geography between the group taught through the Creative Teaching Method and the group taught through the traditional method.	ACHA	43.33	16.64	55.51	20.92	2.71*
	ACHB	41.16	12.96	53.54	18.21	3.30*
	ACHC	36.08	15.92	41.85	15.15	1.56

* significant at 0.05 level
 ** Significant at 0.01 level

From the study the following conclusions have been derived. Out of it, conclusions 1 and 2 relate to general thinking, from 3 to 19 relate to creative thinking in geography and its sub-parts and 20 and 21 relate to achievement in geography of eighth graders.

1. The treatment of Creative Teaching Method in geography when compared with the traditional method, did not produce differential effect upon general creative thinking of eighth graders.
2. The treatment of Creative Teaching Method in geography when compared with the traditional method, did not produce differential effect upon the sub-parts of general creative thinking, such as seeing problems, unusual uses, and consequences.
3. The Creative Teaching Method did not produce differential effect upon the cognition abilities in geography of eighth graders when compared with the traditional method of teaching geography.
4. When compared with the traditional method of teaching geography, the Creative Teaching Method developed higher mean scores on the mental abilities of verbal comprehension and verbal analogies.
5. There were no differential effects for the mental abilities of verbal classification, general reasoning, penetration, conceptual foresight of eighth graders because of the Creative Teaching Method of teaching geography.
6. No differential effect were found upon the memory abilities in geography of eighth graders because of the treatment of Creative Teaching Method compared with the traditional method of teaching geography.
7. The mental ability of memory for paired associates of eighth graders received significant positive effect because of the Creative Teaching Method compared with the traditional method of teaching geography.
8. The traditional method of teaching geography produced higher mean scores on the mental ability of memory for word meaning of eighth graders than the treatment of teaching through Creative Teaching Method.
9. There were no differential effects for the mental abilities of memory for ideas, concept recall, finding the relation with definition and learned information of eighth graders because of the Creative Teaching Method.
10. The treatment of Creative Teaching Method in geography did not produce differential effect upon divergent production abilities in geography of eighth graders, when compared with the traditional method.
11. The mental ability of elaboration of eighth graders received significant effect by the Creative Teaching Method than the traditional method of teaching geography.
12. The treatment of Creative Teaching Method in geography did not produce differential effect upon ideational fluency, spontaneous flexibility, associational fluency, expressional fluency, and originality of eighth graders when compared with the traditional method.

13. The convergent production abilities in geography of eighth graders improved more significantly by the Creative Teaching Method than by the traditional method of teaching geography.

14. The Creative Teaching Method in geography produced more significant mean scores on the mental abilities of location of central idea and ability to see classes of eighth graders than the traditional method.

15. No differential effects were found for the mental abilities of education of conceptual correlates, ordering, semantic redefinition and attribute listing of eighth graders because of the treatment of Creative Teaching Method when compared with the traditional method of teaching geography.

16. When compared with the traditional method of teaching geography, the Creative Teaching Method did not produce differential effect upon the evaluation abilities in geography of eighth graders.

17. The Creative Teaching Method developed the mental ability of 'logical evaluation', significantly higher, in eighth graders than the traditional method of teaching geography.

18. The treatment of Creative Teaching Method did not produce differential effect upon the mental abilities of class specification from the list of possible answers, class idea to be evaluated, experimental evaluation, production of answers involving the interpretation of common objects and sensitivity to problems of eighth graders when compared with the traditional method of teaching.

19. The treatment of Creative Teaching Method, when compared with the traditional method of teaching geography did not produce differential effect upon the creative thinking in geography of eighth graders.

20. The mental abilities of verbal comprehension, verbal analogic memory for paired associates, location of central idea, ability to see classes, elaboration and logical evaluation under the creative thinking in geography of eighth graders could be developed significantly because of the treatment of Creative Teaching Method than the traditional method of teaching geography.

21. The Creative Teaching Method compared to the traditional method of teaching geography produced higher mean performance scores on the achievement in geography of eighth graders.

22. The Creative Teaching Method did not produce any negative effect upon achievement in geography of eighth graders.

MARY JOSEPHINE LOUIS: A CRITICAL STUDY OF THE COMMUNICATION PATTERNS ADOPTED BY COLLEGES OF EDUCATION, M.S.University of Baroda, 1979, *Supervisor: D.B.Desai.*

The Problem

The Objectives

The main objective of the study is to critically evaluate the pattern of communication from Colleges of Education to the practising schools responding to innovations. Effective communication is affected by source variables, channel variables message variables, and also feedback variables (Rogers, 1973) . The contribution of these variables decide the communication pattern.

More specifically the objectives are:

1. To study the distortion if any in the communication between the colleges of education and the practising schools.
2. To study the source, message, channel, and receiver variables as perceived by the college teachers and the practising school teachers and to relate this perception to the effectiveness of communication.
3. To analyse the barriers to communication between Colleges of Education and their practising schools.
4. To describe the nature of an effective feedback system between the schools and colleges based on the findings of this study.
5. To evolve a working model of communication based on this operational survey.

Methodology

3. *The Design*

Eighteen hypotheses were evolved to achieve the above objectives. Necessary data were collected from all the fourteen Colleges of Education of the Annamalai University. Three tools were pressed into service to collect the relevant data to test the hypotheses evolved.

(a) *Tools*

The study aims at finding the communication of innovations from Colleges of Education. The effect of the communication is indirectly construed from the innovations of the schools. Hence tool I was a scale to measure the innovativeness of the schools. This scale consisted of eighty-four innovations covering all possible innovations in a school system.

The second tool is a communication scale which has been mainly based on Sampson's Communication model. This tool covers six variables of the source, three of message, four of media, four of receiver and also five statements relating to the nature of feedback. With a view to finding out the barriers to communication a third tool was evolved enlisting twelve barriers to communication on the basis of the pilot study conducted earlier. Colleges and school teachers were required to rank them according to their intensity.

(b) *Sample*

All the fourteen Colleges of Education of the Madras University area and the Colleges of Education of the Madras Annamalai University were taken up to form the source system. To each of these colleges of Education five to ten of their practising schools formed the receiver system.

(c) *Data Collection*

All the three tools were administered to both the college and school teachers. Keeping the matter constant, statements were modified to suit both the college teachers and school teachers. Thus it was possible to collect the communication and reception scores. The investigator after obtaining permission from both the Directors of collegiate and school education personally administered the questionnaire and obtained the data.

(d) *Analysis of Data*

The category war (15) and overall innovativeness scores were calculated. The factor war (8) and overall communication scores were calculated. The intensity of the barriers were calculated giving weightage according to their ranks. Using percentages, t-test, χ^2 -tests and correlation statistics all the eighteen hypotheses were tested which led to the following findings.

Findings

1. There is agreement relating to innovativeness of schools between college teachers and school teachers. This is an evidence to communication between the two types of institutions. College teachers know what is happening at schools. There is no isolation at least between colleges of Education and their practising schools.
2. Except in the case of 'Teacher Centre methods' and co-curricular activities, among the other types of innovations there is no difference in distortion between the colleges of education and their practising schools.

There is a tendency among school teachers to speak well of themselves. Their assertion about themselves is contradicted by the College teachers who feel

differently about the two items. Relating to the rest of the thirteen innovations there is no difference in distortion.

3. There is positive correlation ($r=.753$) between communication score and innovative index of schools. The corollary that emerges out of this finding is that, the more the communication the better the innovativeness of schools. Therefore, to the extent we are able to improve the communication system, we could also improve innovativeness among schools or in other words to improve the innovativeness of institutions, an improved system of communication is essential.

4. The overall study reveals no distortion between communication from colleges and reception at schools. But when a detailed factor war analysis was taken up it was found that there is no distortion in the perception of source ($t=5.347$), message ($t=5.887$), oral media ($t=3.4001$), written media ($t=2.239$), receiver ($t=5.684$), and feedback ($t=7.449$) variables between the colleges of education and their practising schools.

There was significant distortion in 6 of the 8 components of the communication system; The truth that emerges out of this finding is that the communication system between the Colleges of Education and the schools is not a well planned one. A lot of improvement in the system is necessary. An analytical study as to how to improve the system has to be taken up. Among the various components of communication, the distortion in the feedback variable is the maximum. The weakest link in the communication system is 'feedback'. There is need to tone up 'feedback' between Colleges and Schools.

5. There is no difference in the communication pattern adopted by men and women ($\chi^2=0.2549$) private and government ($\chi^2=0.3933$), Madras and Annamalai University ($\chi^2=0.3591$) Colleges of Education.

Model Recommended for Communication between Colleges of Education and Schools

In the attempt to evolve an effective model for communication by colleges of education the model chosen to serve as the criteria for this study, forms the base. The components of this criterion model are taken one by one for discussion and necessary modifications are made in the light of this research.

(a) sources:

There was high distortion in the perception of the variables between the colleges of education and the schools. The characteristics of the sources system mentioned were: (i) Trustworthiness; (ii) Expertise; (iii) Power; (iv) Intent; (v) Attractiveness; and (vi) Similarity to the receiver.

The distortion reveals that these characteristics are not at all perceptible and therefore in the recommended model, all these ingredients of the source variables are included.

The change agent's success is positively related to his client orientation rather than change agency orientation. The clients feel that 'the college staff do not consider the practical difficulties of the school staff while advocating new ideas'. Taking into account this defect, one more ingredient to the source variable is added, namely (vii) Sensitiveness to the difficulties of the client system.

Again the school staff feel that 'the college staff are not readily available for consultation when the school staff need them'. This reveals the lack of empathy on the part of the college teachers. Hence another ingredient is added to the source variable, namely: (viii) Readiness to help the client system.

Yet another allegation against the college teachers is that 'the college teachers do not practise the new ideas they advocate'. In other words college teachers do not provide the leadership required by the school and the ingredient added is : (ix) Leadership.

Altogether in the recommended for communication the source variable consists of nine ingredients:

(b) *Message:*

The ingredients included in the criteria on model were : (1) Structure (2) Content, (3) kind of appeal. The message distortion was also high. All the three ingredients of the message variable are retained in the recommended model because they are yet to be sincerely implemented. Content includes the nature of the message, the need and the communicability of the message. To introduce clarity, this ingredient is further split into : (1) Profitability of the message, (2) Compatibility of message with the needs of the receiver, (3) Communicability of the message.

Altogether the recommended model is to consist of 5 ingredients in the message variable.

(c) *Media :*

Three interpersonal channels and mass media channels were included in the study. The distortion in oral media was maximum, written media less, and indirect and mass media insignificant. It follows that for successful communication mass media channels are to be mainly used, next in order of merit is indirect channel. It might amount to having opinion leaders (Rogers 1971) as a via media and the remaining two channels need toning up. All the four ingredients are retained in the recommended communication model.

(d) *Receiver:*

The ingredients included in the receiver variable were: (1) Personality; (2) Ability; (3) Kind of participation; and (4) Degree of participation. The distortion in the perception of the receiver variable was high. The characteristics that facilitate the communication flow are lacking. They are to be developed in right earnest.

In this study the college teachers have stated : (1) 'The school staff are unable to express clearly their felt need', (2) 'the Heads of institutions do not support the communication flow of new ideas', (3) 'the school staff do not feel the need for a change', are three important barriers to the flow of communication. All the three, it is felt, are due to lack of motivation. The first includes ability also. which is already one of the ingredients of the receiver variable. Therefore 'motivation' is included as the fifth ingredient of the receiver variable.

(e) *Feedback*

Feedbacks seem to be the weakest link in the present pattern of communication. The distortion is maximum here. While the college teachers feel that they do take care of this aspect school teachers feel that they don't. There is need to tone up the system of feedback.

Apart from these, lack of a system of horizontal flow of ideas and two-way flow of communication are found to be important barriers to communication both by college and school teachers. Therefore provision for these two ingredients are to be made in the media variable of the recommended model of communication.

Suggestions to Colleges of Education

1. Colleges of Education as one of the source agency for innovation have to strive to develop the source characteristics so that communication could be effective.
2. It is the duty of the Colleges of Education to induce the school teachers to develop the receiver characteristics of personality, ability, willingness to participate, and motivate them towards change.
3. Sufficient attention to feedback is necessary. There should be some system to check up the progress of the innovation from time to time and to render assistance wherever necessary.
4. The climate at the Colleges of Education should be open and allow free admission to teachers whenever they want to contact them. Involvement and commitment to education on the part of the college teachers should be felt by the school teachers.

SURAJ PRAKASH MULLICK: AN INQUIRY INTO THE RELATIVE EFFECTIVENESS OF LINEAR STYLE BOOK FORMAT AND MULTI MEDIA PROGRAMMES, South Gujrat University, 1980, Supervisor: G.B.Shah.

The Problem

There is a great variety of programmed instruction materials in India and abroad. Before any of them could be recommended for large scale use in Indian educational system, it was necessary that their effectiveness was investigated in the natural conditions of their use. With this objective in view, two programmed instruction materials, namely a 'Book Format Programme' and a 'Multi-Media Programme' on the Flower based on the syllabus of classes V and VI were developed. The purpose of the study was to inquire into the relative effectiveness of these programmes on different levels of the target population with reference to various criterion measures.

Methodology

The data in this study were collected by using the following sets of instruments :

1. Raven's coloured progressive matrices intelligence test.
2. Class tests in English.
3. Class tests in General Science
4. Criterion tests of (a) Identification of terms; (b) Recall of terms; (c) Comprehension and application; (d) Drawing ; (e) Spelling ; (f) Oral and ; (g) Teacher made test.
5. Opinion on an Attitude Opinionnaire

Hypotheses

Five groups of hypotheses were devised which were intended to investigate (a) the effectiveness of the BF programme; (b) the effectiveness of the MM programme; (c) the relative effectiveness of the BF and MM programmes; (d) the comparative performance of different levels of students in intelligence, English, and General Science, and (e) the interaction effects between the two treatments, namely programmes and the three levels of students in intelligence, English, and General Science respectively.

Procedure

The study was conducted on 204 children of class V and 240 students of class VI. The effectiveness of the BF and MM programmes was investigated separately. The

subjects were administered the pre-tests, immediate post-tests, and retention tests in identification and recall of terms and the effectiveness was determined in terms of gain scores. To investigate the relative effectiveness of the BF and MM programmes, six pairs of groups of groups BF1 and MM1, BF2 and MM2 ... and BF6 and MM6 were formed by matching the students in accordance with their ranks in terms of intelligence scores. The relative effectiveness of the programmes was investigated by comparing the achievements of students in the BF and MM groups on thirteen criterion measures. The students in each matched group were further equally divided into three levels of high, average, and low on the three variables, namely intelligence, achievement in English, achievement in General science. At each level, the students had received one of the two treatments, namely the BF and MM programme. The significance of the difference between the achievements on the criterion tests of the students at different levels and the interactions between levels and treatments were investigated.

Findings

1. The programmed instruction materials in the form of Book Format (BF) and Multi-Media (MM) were found to be a viable means of instruction for teaching content in science to children of classes V and VI.
2. The MM programme was found to be superior to the BF programme in producing learning effects as measured in terms of gain scores in the tests of identification and recall of terms as well as scores in tests of comprehension and application, drawing and teacher-made tests.
3. The BF programme was found to be superior to the MM programme in so far as the number of spelling mistakes committed by the students were concerned.
4. The MM programme and the BF programme did not produce differential learning effects in so far as the number of mistakes in punctuation in the oral test were concerned.
5. The MM programme was completed by the students in less time as compared to the BF programme.
6. The learning outcomes are not as much influenced by the intelligence as they are influenced by the related capabilities, e.g. their achievements in English and/or General Science.
7. The number of significant interaction effects between levels of students in intelligence, English, and General Science and the treatments, viz. the BF and MM programmes, were less in the case of class V children. The trends in these interactions were also less discernible. There was a greater number of significant interaction effects in the case of class VI children. The trends in these interactions were more discernible.
8. The attitude of the learners towards the BF programme was positive. Some students had opined that they would learn even better from the lesson rather than the

lecture method. They had opined that the lesson was useful for schools and was good for revision of the course.

9. The attitude of the learners towards the MM programme was positive. In contrast to the BF Groups, some students had opined that they would learn better from the lecture method as compared to the MM programme. Like the BF groups, they had however opined that the lesson method was useful for schools and was good for revision of the courses.

SHANTI LAL GUPTA: AN INTENSIVE STUDY OF THE FACTORS INFLUENCING THE GROWTH OF GIRLS' EDUCATION AT THE ELEMENTARY STAGE IN UTTAR PRADESH WITH SPECIAL REFERENCE TO MEERUT DISTRICT: University of Meerut 1983, Supervisor: S.K. Das Gupta.

The Problem

The UNESCO charter on the declaration of human rights says: 'Every child has the right to education. Education shall be free at least in the elementary and fundamental stages, Elementary education shall be compulsory'. The Indian Constitution in 1950 also provided for three and compulsory education up to the age of 14 years. However, the growth of girl's education at the elementary stage in Uttar Pradesh as well as in the Meerut district was very slow and both the state and the district lagged behind the Indian norms in 1979.

Hypothesis

1. The growth of girls' education is versely influenced by the proportions of distances between the school and the residence.
2. The acceptance of the need of girl's elementary education by the parents/guardians varies from area to area and community to community.
3. The attitude of dependence on girls for help at home/farm/shop by their parents/guardians influences their educational growth adversely.
4. The school costs, such as costs of books, stationery, clothing, transport, etc., etc., inversely influence the growth of girls' education in backward areas, and,
5. The school organization pattern, such as availability of separate girls' schools, female teachers, sanitary facilities, directly influences girls' education.

Methodology

Since the study had a historical perspective to be examined and empirical evidence to be collected for the study, the survey cum-interview techniques were used. As there was no tool readily available for the identification of the factors that influence the growth of girls' education at the elementary stage following tools were developed and used: (1) School information blank; (2) Interview schedule for drop-outs; (3) Interview schedule for parents/guardians; (4) Schedule for stay-ins; and (5) Questionnaire for school supervisors.

The data/information used in the study were collected from primary as well as secondary sources, such as libraries, published reports and literature, unpublished documents, and the individuals, such as top level planners, administrators, decision-makers, drop-outs, their parents, stay-ins, school supervisors, etc. The sample for intensive study in the district consisted of (a) 17 primary and middle schools selected through stratified random sample selection technique; (b) 278 drop-outs of the selected schools; (c) 278 parents/guardians of the drop-outs; (d) 800 stay-ins i.e. (girls); and (e) 10 school supervisors.

The data collected were reorganized in order to find out the periodic and annual growth rates, percentages and other meaningful relationships. The hypotheses were tested by applying chi-square.

Finding

1. The growth of girls' education in the state was 800 per cent and that of the boy's education was 250 per cent during 1946-79. However, the growth has been uneven and unsystematic.
2. There is continuous growth in the number of primary schools for girls, boys, and total up to 1973-74. In 1974 all the primary schools were declared as mixed schools.
3. The number of senior basic schools (middle school) for girls and boys have also increased.
4. The schooling facilities in rural areas for primary and middle levels have also increased during 1956-78. However, the increase between 1956 and 1978 is 11.48 per cent in terms of the habitations having primary school facilities within and 2.32 per cent in case of the habitations having middle school facilities within. Thus the growth is very slow.
5. The position of the school building for primary and middle schools has deteriorated during 1973-78. About 89 per cent rural primary schools and 69 per cent urban primary schools and 80 per cent rural middle schools and 65 per cent urban middle schools were in need of additional classrooms.
6. Fifty per cent rural primary schools, 65 per cent urban primary schools, 23 per cent rural middle schools, and 40 per cent urban middle schools had no playgrounds.
7. The drinking water facilities, sanitary facilities, school library facilities were

very poor in rural primary and middle schools. Forty-eight per cent rural primary and 27 per cent rural middle schools, and 27 per cent urban primary and 11 per cent urban middle schools did not have adequate number of blackboards.

8. The provision of ancillary services, such as free mid-day meals, free textbooks, free uniforms and dresses and attendance scholarships to girls was available to a very small, almost negligible, number of schools. For example, free mid-day meals were provided in 7.62 per cent rural primary and 1.17 per cent rural middle schools. The free uniforms were provided in 0.12 per cent rural primary and 0.5 per cent urban primary schools and 0.25 per cent rural middle schools and 1.32 per cent urban middle schools.

9. The total expenditure on elementary education has increased from 121 lakhs in 1946-47 to 13,421 lakhs in 1978-79. However, the percentage share of expenditure on girls' education has remained almost unchanged. In other words the girls' education did not receive the desired attention. It remained unimportant and neglected.

10. The private costs of schooling girls was found high. For example, in class 8th overall private costs of schooling girls was found ranging between Rs.295.20 and Rs.438.15 per pupil in government and government aided schools.

The factors that affected the growth of girls' education at the elementary stage were:

1. The distance travelled by a girl to reach a school in rural areas affected their education. The more was the distance travelled by girls the lesser was the enrolment for those areas. Thus distance influenced the growth.

2. The acceptance of the need of girl's elementary education by parents/guardians varied from area to area and influenced the growth of girls' education at the elementary stage in rural areas.

3. The dependence on girls for help for one or the other work in home/field/shop caused withdrawal of girls in 87.41 per cent cases.

4. The school costs were fairly high and heavy and 63.67 per cent parents/guardians considered them as unbearable and third most important reason for withdrawing girls.

5. Inadequate schooling facilities and poor quality of the existing schooling facilities in rural areas influenced the growth of girls' education at the elementary stage.

6. School organization pattern, poor supervision system, and inadequate financial investment also contributed towards the slow growth of girls' elementary education as compared to boys' elementary education.

7. The growth was less in rural areas as compared to urban areas.

K.C. BASTIA: A STUDY OF THE NATIONAL ADULTS EDUCATION PROGRAMME IN THE TRIBAL REGION OF ORISSA STATE, M.S.University, 1983, *Supervisor*: G.R.Sudame.

The Problem

Of the total population of India, as per the 1971 Census, 6.94 per cent belonged to the Scheduled tribe communities. Even in post-independence India, they are isolated from the mainstream of national life. In Orissa, the population of these tribes is 5.07 million (Census of 1971), and they constituted 13.34 per cent of the total tribal population of the country and 23.11 per cent of the total population of the state. The literacy percentage for the tribals in Orissa was 9.5 per cent in 1971 as against 26.2 per cent for the general population. The initiation of the National Adult Education Programme (N.A.E.P.) in the country in 1978 was expected to benefit such deprived communities. The N.A.E.P. was formulated to bring in social and political awareness among the learners, to develop their functional competence and to teach them literacy and numeracy skills. In line with the policy statement of the national Government, the Government of Orissa decided to implement the N.A.E.P. in the state through different Government and voluntary agencies. It was decided to cover 5.5 million adults in the age group of 15-35 years within a period of five years. During the year 1979-80 the enrolment of tribals in N.A.E.P. was 29.36 per cent of the total enrollment in the state, which was not very encouraging. This is the position during the first year of actual operation of N.A.E.P.(1979-80); much more is expected to be done in the following year for the tribals through the N.A.E.P.in the state. The review was made broadly in the following areas:

1. Adults learning relating to attitudes, interest motivation of adults, methods and media of instruction.
2. Evaluation of adult education programme with reference to the problems and impact of adult education.
3. Education for the tribals with reference to adult education.

The study was undertaken with the following objectives:

1. To identify the problems and needs of the tribals pertaining to their economic, social, cultural, and political spheres of life.
2. To study the process and content of N.A.E.P. in the tribal region with respect to its objectives.
3. To study the perceptions of the tribals with regard to potentialities of the N.A.E.P. to solve their problems and needs in their day-to-day life situations.
4. To study the relevance of the N.A.E.P in relation to the problems and needs of the tribals in their life situations.

5. To study the impact of N.A.E.P. on the tribal learners with respect to their achievement and behavioural changes.

Methodology

a. *Sample.*

The study was conducted in twenty-one villages selected from three gram panchayats of Mayurbhanj district in Orissa state. Forty Adult Education Centres in these villages, which were at the functioning stage in 1979-80 were constituted of forty instructors, 106 community leaders, 306 learners, 108 illiterate adults, and sixty-eight drop-outs.

b. *Instrumentation*

The following tools were prepared by the investigator for the collection of data (1) Village Information Schedule, (2) Interview Schedules for the following: (i) Villagers (ii) Instructors, (iii) Community leaders, (iv) Learners, (v) Illiterate adults, (vi) Drop-outs; (3) Observation Schedule; (4) Hypothetical Situation test; and (5) Achievement test.

Data Collection.

Data were collected from the official records by conducting interviews with the respondents. Apart from these, necessary data were collected through observations of the life style of the tribals and visits to the Centres. To study the impact of N.A.E.P. a hypothetical situations test and achievement test were administered.

Findings

1. Among the population of twenty-one villages sixty-six per cent were cultivators, twenty-nine per cent daily wage earners and the remaining five per cent were craftsmen.

2. The infrastructure facilities in the twenty-one villages with regard to water supply, electricity, educational instructions, banks, cooperative societies, etc. were inadequate.

3. Most of the tribal population of the locality was facing problems like under-employment, low agricultural production, poor housing, insanitary conditions of living, and exploitation by the money lenders and local traders, etc.

4. Physical facilities at the centres with respect to seating arrangement, lighting arrangement, drinking water facilities, etc. at most of the centres were not satisfactory.

5. A majority of the instructions were not found suitable with respect to their age, educational qualifications etc.
6. The instructors played a major role in motivating the illiterate adults to join the centres.
7. The training programme for the instructors was not found to be effective with regard to content coverage, organization of field trips, group discussions, etc.
8. Percentage of dropouts for female centres was higher than the male centres. Major reasons for dropout from the centres were poor economic conditions of the learners, family problems, etc.
9. The curriculum followed at the centres mainly concentrated on the teaching of literacy and numeracy skills.
10. Blackboard, cloth, primer and a Reader were the main instructional materials used at the centres.
11. The teaching programme carried out at most of the centres was monotonous because of use of only lecture method and Oriya language as the medium of instruction.
12. Although oral and written tests were conducted occasionally to test the achievement of the learners, these were not regularly and systematically done.
13. Supervision of most of the Centres was very infrequently done.
14. The payment of remuneration and light charges to the instructors was insufficient and irregular.
15. Most of the community leaders, learners and illiterate adults perceived that the participants would be able to raise their socio-economic standard of living by joining the N.A.E.P. Centres.
16. More than half of women learners wanted to learn crafts like sewing, embroidery, matmaking, basketmaking, etc.
17. The performance of majority of learners in the achievement test was relatively higher in literacy and numeracy skills, than the other two components of N.A.E.P. namely awareness and functional skill development. The male learners did better than the female learners in the literacy test.
18. It was revealed from the hypothetical situation test that the learner group was more enlightened than the illiterate adult group.
19. The impact of N.A.E.P. on the neoliterates in different aspects and improvement in their life was found to be effective in a very few cases.

AVINASH GREVAL: A STUDY OF HYPOTHESIS-MAKING AND HYPOTHESIS-TESTING ABILITIES IN SCIENCE IN RELATION TO INTELLIGENCE, CREATIVITY, AND SOCIO-ECONOMIC STATUS, M.S. University of Baroda, 1982, *Supervisor*: B.K. Passi.

The Problem

The main objectives of the study were: (i) to construct tests of hypothesis-making ability (HMA) and hypothesis-testing (HTA) for higher secondary school science students; (ii) to study the relationship of HMA and HTA with intelligence, creativity, socio-economic status (SES) age, school achievement and sociometric status (SMS); (iii) to analyse the interactions of different independent variables (i.e. , intelligence, creativity, school achievement, sex, age ,SES, SMS and family size) as contributing towards the variance in HMA and HTA; (iv) to study whether there exist any significant differences between the HMA and HTA in respect of the independent variables of the study; and, (v) to identify the contributory factors of HMA and HTA in science through factor analytic approach.

Methodology

The study was conducted on a sample of 555 students (350 boys and 200 girls) of class XI Bhopal city, studying science as an elective subject.

Findings

1. HMA scores were significantly correlated with intelligence, achievement in science, overall school achievement, SES and SMS. However, the HMA scores were not correlated significantly with age.
2. HTA scores were found significantly correlated with intelligence, creativity, achievement in science as well as overall school achievement, SES and SMS, but negative insignificant correlation was found with family size.
3. Creativity and SES were found to be significantly contributing towards the variance in HMA scores. Similarly family size, SMS and gender of the pupils also found to be contributing significantly towards the variance in HMA scores.
4. Intelligence and school achievement were found to be significantly contributing to the variance in HTA scores. It was also found that the effects of intelligence and SES, school achievement and SES affected significantly the variance in HTA scores. Also age, family size, and SMS were found to be significantly contributing towards the variance in HTA scores.

5. The difference between the HMA means of the high and low criterion groups based upon intelligence, achievement, and age group was not found significant. However, the difference between the HMA means of the high and low creative groups was found to be significant. Similarly, the difference between high and average, high and below average SES groups was found to be significant. The differences between the means of high and small family size and SMS were found significant.

6. The difference between the HTA means of the high and low intelligence, school achievement, age and SMS groups were found significant. The difference between the HTA means of high and low and average and low SES groups was found significant. Similarly, the differences between high and low creative groups, small and large family sizes, boys and girls were not found significant.

7. The five factors extracted through principal component analysis by varimax rotation were named as factors of (a) Divergent Productive Ability (fluency, flexibility, and originality); (b) General Mental Ability (intelligence, school achievement, SES and HTA); (c) Socio-Educational (family size, SES and school achievement); (d) Hypothetical Thinking (HMA, HTA and school achievement); and (e) Development factor (age). The number of responses obtained on individual items of the HMA test ranged between 11 and 68 and those obtained on HTA test ranged between 3 and 11.

RAMESHWAR PRASAD VYAS: RELATIONSHIP OF SELECTED FACTORS WITH THE TEACHING SUCCESS OF PROSPECTIVE TEACHERS IN RAJASTHAN, University of Rajasthan, 1983, Supervisor : G.N. Bhardwaj.

The problem

The problem tested the asserted assumption that teaching is a multidimensional activity (Monroe-1950.). Factors such as age, academic achievement, verbal and non-verbal intelligence, personality adjustment, self-perception, attitude towards teaching, teaching aptitude and socio-economic status were selected as predictors and their relationship with teaching success—supervisor rating, self rating, university practical marks, total teaching assessment, university theory marks, and total university marks was studied.

Sample:

Three hundred prospective teachers—150 males and 150 females, studying in B.Ed. during 1979-80 in three different colleges of education of State of Rajasthan under

the jurisdiction of Rajasthan University, Jaipur, made the sample of the study.

Objectives

1. To study relationship among proposed predictors and teaching success (Criteria) in the case of total male and female sample of prospective teachers separately;
2. relationship among proposed predictors in the case of total, male and female sample of prospective teachers separately;
3. relationship among proposed criteria in the case of total, male and female sample of prospective teachers separately; and
4. relationship between the predictors and criteria in the case of upper and lower groups total, male and female sample of prospective teachers.

Methodology

- (a) Normative Survey method was employed in the study. Survey of records was made to collect data pertaining to age, academic achievement, and university marks of qualifying examination and later B.Ed. University marks.
- (b) *Statistical techniques*:- Mean, S.D. Correlations (product moment) of total, male female sample were got computed to study relationship aspect: Factor analysis to find the best crystal-combination of predictors and criteria: Multiple Regression Equations to know the criterion validity, which of the criterion is best: "t" value in the case of upper and lower groups of predictors criteria respectively.

Findings

Academic achievement, verbal intelligence, non-verbal intelligence, attitude towards teaching and SES emerged predictors of teaching success in the case of total and female sample of prospective teachers.

Predictors, academic achievement, verbal and non-verbal intelligence, attitude towards teaching, teaching aptitude and personality adjustment were found very much related with each other indicating that one of them helps in adding to the predictive value of others.

Criterion variables, supervisor rating, self rating, university practical marks, total practical assessment (1+2+3), university theory marks, and university total marks (3+5) were found interrelated except self rating, which showed indifference with university theory marks.

UMMED SINGH: EFFECTIVENESS OF MEDIA WITH REFERENCE TO CLASSROOM ETHOS, South Gujarat University, 1983, *Supervisor*: G.B. Shah.

The problem

In no other field has the impact of scientific and technological developments been more noticeable than in media taxonomy. But research on media has generally been concerned with student and teacher acceptance. Rarely has it been concerned with sociological and psychological factors of acceptance of the innovation as a permanent part of educational practice.

The main purpose of this study was to know the effect of media on classroom ALP Ethos and to compare the four groups and then replicates in terms of their gain achievement scores, 'actual' pre- and post-classroom situations and 'actual' post-ALP ethos (after treatment) with their 'ideal' ALP ethos.

Methodology

With this objective in view three programmed instructional materials namely (i) linear book format, (ii) tape-slide format, and (iii) audio tape format on 'Reproduction' based on syllabus of class-X were developed. Each PLM was consisted of three sub-units. The content, sequence, examples and criterion frames were the same in all the programmes. In addition to these three experimental groups one more group, i.e. traditional group was also considered for comparison of their effectiveness in terms of gain scores and achieving 'actual' post-situations nearer to their perceived 'ideal' classroom situations as measured by Thelen's ALP classroom ethos instrument, 1972. The study was replicated on another four groups of the same schools.

The study was conducted on randomly selected 240 students of Class-X from Boy's Secondary school of Sardarshahr (Rajasthan). Four pairs of groups were formed by matching their age, science attitude score, and intelligence scores. Groups were also found matched on mean achievement scores based on pre-criterion test. Each group that consisted of 30 students was allotted to a particular treatment randomly. Pre-test and post-test designs were used to test the null hypotheses. Analysis of variance (F-test) with a derived technique of least significance difference (LSD) was used to test the significance of difference among the mean achievement scores of four groups and their replicates. The means and standard deviations were basically the scores of classroom ethos. For identification and comparison of classroom ethos and their patterns, agreement grid and profile developed by Herbert A. Thelen (1972) were used. Therefore attempts have been

made to test each hypothesis related to classroom ethos on the basis of obvious differences emerged on profile as the ranked means of top and bottom clusters.

Findings

1. The underlying basic pattern of congenial group educative life for 'actual' classroom before and after the treatment of PLM in book format, tape-slide format and traditional treatment by teacher revealed the obvious differences between the two top and bottom clusters of their pre — and post-situations.

2. The groups of different schools perceived similar in terms of ALP ethos for 'ideal' classroom situations but they perceived differently for 'actual' classroom situations after getting instruction through different media.

3. Those groups getting instruction through tape-slide programme, PLM book-format and traditional by teacher have perceived 'actual' post-ALP ethos nearer to their perceptions of 'ideal' classroom.

4. The groups during instruction through PLM book format have given more emphasis on authenticity aspects of the ethos as compared to other groups.

5. The audio-tape as an instructional media was not found effective in creating an 'ideal' classroom ethos with special reference to the legitimacy and authenticity aspects.

6. All the groups and their replicates were given top priority to the productivity aspects of the ethos for 'actual' post-classroom situations in comparison to the other two aspects of ethos.

7. There was no significant difference between the gain scores of traditional and tape-slide treatments. Similarly there was no significant differences between the results obtained by PLM-book and audio-tape treatments. However, both traditional and tape-slide treatments were found to be significantly better than the PLM book or the audio-tape treatments.

8. It was found that those groups after getting instructional treatments perceived their 'actual' classroom nearer to their 'ideal' classroom in terms of ALP ethos (in the present study tape-slide and traditional treatments) had also achieved high gain scores. Therefore, it may be concluded that use of any media treatments in teaching-learning process, if capable in creating ideal classroom situations would be also helpful in achieving high gain scores.

Geography

B.P. PANDA: CHHATTISGARH BASIN—A STUDY IN AGRICULTURAL LAND USE, Jiwaji University, 1974, *Supervisor*: J.P. Saxena.

THIS THESIS deals with the social, techno-organizational and production characteristics of agriculture in Chhattisgarh Basin. The structural characteristics of agriculture are revealed in the cropping pattern and crop combination regions. The geographical background provides a detailed study of physical conditions (e.g. relief, slopes, soils, and features of regional climate) in which the regional agriculture has developed. Their influence is usually subtle and inseparable from inherent characteristic of agriculture. Other external conditions like transport, marketing, and prices have also been suitably dealt with.

Objectives

1. To what extent agricultural land use is dominated by the influence of physical features, e.g. relief, slopes, soils, and features of regional climate.
2. How far the social, techno-organizational and production characteristics of agriculture have influenced each other in a multiple correlation.
3. To what extent the cropping pattern is determined by agro-climatic conditions and by social and economic conditions of the farmer.
4. To examine the extent to which agricultural land is misused and underutilized.
5. To examine the nutritional aspect of land use - the amount of self-sufficiency in food production, the extent of undernutrition and malnutrition.
6. To define and delimit agricultural land use regions in order to suggest a base and a framework for planning agricultural development

Methodology

1. Books, records and reports of work done on the region, e.g. Settlement Reports, Royal Commission Report on Agriculture, Reports of Irrigation Commission etc, books on land use and agricultural geography both general and specialized aspects have been made use of.

2. Processing, mapping, and interpretation of data collected from secondary sources e.g. government offices and semi-government organizations was done.

3. Field reports from the tillers of soil, government and semi-government agencies working in the region were collected and incorporated in the work after scrutiny.

4. A land use survey of eight sample villages in different parts of the region was made by the author himself. The survey was of a very comprehensive nature and included all the external and internal characteristics of agriculture. A diet survey of some sixteen villages was also carried out to find out the structure of regional diet.

5. A contour map of village Turanga at 5' interval was prepared to study the effect of slope (micro-level) on cropping pattern and production level of crops.

6. Maps and diagrams relevant to the topics have been prepared to illustrate and explain all the aspects of agricultural land use. Suitable quantitative techniques have also been employed to measure the variability of rainfall, intensity, and diversification of cropping, agriculture efficiency, and to delimit crop combination and agricultural land use regions.

Findings

Due to very low level of capital inputs and limited application of technical and scientific knowledge regional agriculture is much influenced by ecological conditions. Slopes, soils, and seasonal distribution of rainfall have a great bearing on the system of land use, cropping pattern and the the system of crop and land rotation.

Structural Characteristics

The cropping pattern reveals that 71 per cent of gross cropped area (G.C.A.) is used in kharif and 29 per cent is utilized in rabi season. Paddy dominates the cropping pattern in kharif by sharing 57 per cent of G.C.A. Teora and Linseed are major crops of the rabi season and share about 20 per cent of G.C.A. About 80 per cent of the G.C.A. is devoted to Paddy and pulses and 91 per cent to foodgrains. The share of commercial crops is practically insignificant. About 7 per cent of G.C.A. is devoted to oilseeds and rest of 2 per cent consist of other crops. It may be observed that Teora and Linseed are cash crops and yields are very low and fluctuating. So paddy is the only major crop of the region which forms the backbone of agricultural economy. It is both subsistence and commercial—the surplus being sold out for cash. The crop combination of the basin was found to be $E_{50a} + S_{1pt}$ i.e. dominantly rice with

secondary teora. Intensity of cropping is apparently high due to cash crops of teora and linseed, otherwise it is very low. Diversification is low to minimum over most parts of the basin. It is moderate to high only in the brown kanhar soils of the west.

Social Characteristics

Land tenure is very much improved in favour of the farmer with Malik Makbuja rights to all. However distribution of land holdings is disproportionate: 66 per cent of the farming households who own and operate 20 per cent of the area in units of 2 hectares are extremely poor, resourceless and underemployed. This arable land is not efficiently managed for lack of inputs and indebtedness of the farmer. Another 17 per cent of the households in the size group 2.0 to 4.0 ha. is also ill equipped and 20 per cent of the arable land held by them is not fully utilized for optimum returns. However 60 per cent of the arable land managed in units of <4 ha. is efficiently managed though uncertain weather and poor inputs (particularly irrigation) still continue to form severe limitations.

Techno-Organizational Characteristics

Of the net sown area (N.S.A.) 15.6 per cent is irrigated from all sources of irrigation. Almost all the irrigation works are seasonal in nature and designed to protect the paddy crop from failure. Only in years of good monsoon there is some water available for rabi irrigation. As 84 per cent of the N.S.A. is dependent on erratic monsoon outturn of crops specially paddy keeps fluctuating from year to year. Fertilizer inputs are very low and 6.5 kg/ha. of N. and 2.5 kg/ha. of P_2O_5 is insufficient to replenish the soil fertility.

Labour input is high and number of actively employed persons ranges between 80 and 140 per 100 ha. Mechanization is very low and <5 h.p. of tractors and self-propelling agricultural machinery is used per 1000 ha. High inputs of animal power is characteristic typological feature of this region and as much as 40 to 50 units (in animal units of 500 kgms) per 100 ha. is used. Fodder is scarce and breed is weak and stunted. Agriculture cannot be expected to be very productive with such low capital inputs.

Production Characteristics

Land productivity is low and gross agricultural production ranges between 8 and 10 quintals per ha. Agricultural efficiency was found to be 87.3 per cent of the national average. Efforts to raise output by introducing H.Y.V. paddy has not met with significant success due to highly erratic nature of monsoon and protective type of irrigation works. Traditional varieties still cover < 90 per cent of the paddy area. The degree of commercialization was found to be low to medium. Usually 30 per cent to 40 per cent of the gross agricultural production is sold out for cash.

Agricultural economy may be termed as semi-subsistence. Medium to high degree of regional specialization characterizes the agriculture of the region.

The type of farming was identified to be "Labour Intensive Non-irrigated Crop Agriculture".

Diet survey reveals that the average caloric intake of 2,364 is sufficient but frequency distribution shows that 30 per cent of the population with <2,000 cal. intake is underfed. Another 21 per cent within the range of 2,000 to 2,250 cal. is also marginally fed. An excessive intake of cereals and a marked deficiency of protective and body building foods like animal products meat, fish, eggs, milk, fruits, and vegetables as well as low intake of fats and edible oils mark the diet of the people. Regional land use should be oriented to reduce or fill this gap in order to make it self-sufficient in food resources.

Agricultural Land Use Regions

The agricultural land use regions are based on inherent characteristics of agriculture and quantitatively defined and delimited. Eleven agricultural land use regions are identified in the basin. They provide the basis for planning agricultural development from a geographer's point of view.

GAUTAM PARASHURAM SINGH : TRANSPORT GEOGRAPHY OF CHAMBAL DIVISION, M.P., Jiwaji University, 1984, *Supervisor*: B. V. Singh.

The Problem

The transportation symbolizes areal interaction. It is movement of people and goods from one place to another. It is one of the factors determining the pattern of economic development. Keeping in view its active role in the process of socio-economic development, the author studied transportation geography of Chambal Division of Madhya Pradesh.

Background

Geometrically, Chambal Division extends from 25°15' to 26°52' N latitude and from 76°30' E to 79°5' E longitude covering an area of 16,140.5 sq. km in the north western part of Madhya Pradesh.

This Division came into existence in the year 1974, when districts Bhind and Morena conspicuous for ravines and robbers were segregated from Gwalior Division for integrated economic development. The district Bhind consists of four tahsils—Bhind, Mehgaon, Gohad, and Lahar and the district Morena consists of six

tahsils—Ambah, Morena, Jaura, Sabalgarh, Bijeypur, and Sheopur.

Structurally the Division falls in transitional belt between Deccan table land in the south and northern plains in the north.

The drainage of the region is part of river Yamuna drainage system. Following the slope, river Chambal, Kunwari, Asan, Sindh, and Vaisaly flow from south west to north east.

The south western part of the region covering tahsils sheopur and Bijeypur is an upland with forest cover. The rest of the area is almost plain with strips of ravines along the rivers. The average elevation of the region from mean-sea-level is 150 to 300 m.

The Division has 4.27 per cent of the total population of M.P. and about 85 per cent of it is dependent on agriculture and allied occupations for livelihood. According to 1971 census, total population of the Division was 16,86,461 resulting in average density of 110 persons per sq. km. The region presents dominance of rural settlements as 90 per cent of the population inhabits in them.

Objectives

With the key objective of analysing the areal imbalances with respect to transportation attempt has been made to:

1. discuss the evolution of transport since Scindia dynasty;
2. present structural analysis of the transport networks;
3. analyse the distribution of transport and their determinants;
4. measure the accessibility in the Division;
5. discuss the traffic flow;
6. discuss the impact of transport of economic development; and
7. formulate transport regions in the Division.

Methodology

Data base : Tahsil has been taken as unit of study. Tahsil-wise data have been obtained from published and unpublished sources. The district census handbooks, the *Jila Sankhyaki Pustika* of the Directorate of Economics and Statistics; Agricultural Statistics of the Directorate of Agriculture, M.P.; Divisional Office Central Railway, Jhansi, Public Works Department have been major sources of the secondary data. Survey of traffic flow was done on important road sections.

Maps: Quarter inch toposheets and maps drawn by the Office of the Divisional Engineer, P.W.D., Chambal Division have been base for cartographic work.

Cartographic techniques: Tahsil-wise maps have been prepared to delineate the distribution of different facets of transport and their determinants. The diagrams have

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have been prepared specially to measure the impact of transport on economic development.

Statistical techniques: The data have been processed to derive inferences. In the structural analysis of roads and railways, formulae pertaining to graphs theory have been applied. The tahsil-wise imbalance of roads and the assessment of their requirement for future have been obtained on weightage or need growth basis.

In computing accessibility of roads and railways the isodromes have been drawn and the area covered by them was measured by planimeter.

The regionalization of transport has been done on weightage basis, applying quartile method.

Findings

Evolution of Transport

The Scindias, the then rulers of Gwalior State in the latter half of 19th century initiated the development of road and rail networks in the Division, which then was a part of the State. During their regime, the roads were classified into five categories Class I, II, III, IV and V. All the roads of the Division were of Class III with 10' metalling and 5' flanks.

It is a grim reality that target of 20 year road development plan could not be achieved in the Division as in the State and the country.

Structural Analysis

The connectivity levels of road networks of the six tahsils out of ten—Ambah, Morena, Joura, Sabalgarh, Sheopur, Bhind, and Gohad are almost equal. In tahsils—Mehgaon, Lahar, and Bijeypur, the level of connectivity falls successively and it is lowest in tahsil Bijeypur.

The author found all the tahsil headquarters occupying the central position within their road networks.

It is useful to mention here that lower spread of road networks carries higher efficiency. The spread is lowest in tahsils Joura and Sabalgarh, it is medium in tahsils Ambah, Morena, and Gohad, high in tahsils Mehgaon and Sheopur and very high in tahsils Lahar and Bijeypur.

Six tahsils Ambah, Morena, Joura, Sabalgarh, Bijeypur, Sheopur, Mehgaon, and Lahar show common pattern of deflection of roads from desirelines. It is lowest in tahsil Gohad and highest in tahsil Bhind.

The level of connectivity of rail networks is medium in four tahsils—Joura, Sabalgarh, Bijeypur, and Mehgaon. It is high in tahsils Morena and Gohad, highest

in tahsil Sheopur and lowest in tahsil Bhind. Tahsils Ambah and Lahar are without rail tracks.

Types of Transport, their Spatial Distribution and Determinants

The roads and the railways are the two main channels of transportation in the Division. Water transport is negligible as only ferries operate on the rivers. The region is devoid of the facility of the air transportation.

The analysis of the distribution of roads in terms and weightage of area and population confirms the tahsil-wise imbalances.

The strikingly low density of unsurfaced roads in all the tahsils confirms that a very large size of the rural population suffers from lack of highway infrastructure and has to face high transportation cost and limited facilities of marketing and hence low return for their agricultural produce.

The density of surfaced road in all the tahsils also is far behind the target of the 20 years road development plan.

The author has computed the tahsil-wise length of roads for its future development, keeping in view the target of this plan. While phasing the development of roads, with a view to minimizing the problems of rural transport, the construction of village roads should be taken up at priority level.

The availability of vehicles per lakh population increased from 217 in 1977 to 335 in 1980 in the Division whereas it was 302 in Madhya Pradesh and 493 in India in the year 1976.

The Accessibility

The present level of accessibility of the villages to the road system is very low indeed in the Division. Taking into account the norms as prescribed by Nagpur and Bombay plans, actual road accessibility (area lying within 5 km from a surfaced road) is 58.17 per cent and rail accessibility (area lying within 5 km from a railway station) is 11.44 per cent in the Division.

The Traffic Flow

The Agra-Jhansi rail section of broad gauge carries 55.35 per cent of the passengers whereas the Gwalior-Bhind and Gwalior-Sheopur Kalan sections of narrow gauge carry 13.89 and 30.76 per cent of the railway passengers respectively.

Likewise out of the total flow of goods, 94.30 per cent was handled by Jhansi-Agra Section, 1.11 per cent by Gwalior Bhind Section, and 4.59 per cent by Gwalior-Sheopur Kalan Sections.

It is noteworthy that road sections connecting urban centres of higher ranks have heavier traffic flow. The traffic volume is highest on Gwalior-Bhind-Etawah road.

section as it has no competition with Gwalior-Bhind rail track of narrow gauge. It is equally noteworthy that the road sections connecting settlements and towns of lower order are underutilized in respect to their flow capacities.

IMPACT OF TRANSPORT ON ECONOMIC DEVELOPMENT

The transport system makes tremendous impact on the economic development. It stimulates the advancement of underdeveloped areas by facilitating access to the previously inaccessible areas.

Transport Regions

The transport in the Division is yet in the developing stage. The tahsil-wise imbalance of the roads has to be removed keeping in view the computed road length. The planning and the construction of village roads is an encouraging trend and a step in the right direction. Simultaneously with the development of networks, the quantitative and qualitative vehicular improvement is a prime necessity so that the capacity of roads may be fully utilized.

ARVIND KUMAR SINGH: INTEGRATED RURAL AREA DEVELOPMENT OF LAR BLOCK, DISTRICT DEORIA (UTTAR PRADESH): A STUDY IN MICRO-LEVEL PLANNING, B. H. University, 1984, *Supervisor*: Narbadeshwar Prasad.

The Problem

The concept of integrated area development refers mainly to two types of integration, i.e. functional (vertical) and spatial (horizontal). The interrelationship among socio-economic activities depends mainly on their location in geographical space. There is always a different pattern in the dispersal and concentration of these activities in space. Thus, location of new functions becomes of prime importance for the integrated development because appropriate location of new function may start a chain reaction of development. What is needed is an objective examination of the realities of a region for appropriate location of centres which may be invested with certain functions/services to achieve an integrated development.

In this theoretical context, the author has carried out an intensive study of the Lar Block (district Deoria, U.P.) with a view to achieving an appraisal of resources and existing development issues on the one hand and to suggesting ways and means for integrated development of the region on the other. The block has been taken as unit of study due to the fact that a development block is a viable unit in India and

is now considered as a virgin field of geographical researches. The specific objectives of this study are:

1. to assess the present level of socio-economic development;
2. to establish the hierarchy of existing settlements on functional basis;
3. to identify and rank central places of various orders and their service areas which may help in micro-level planning for an integrated area development;
4. to assess the magnitude of services required in future and to recommend their appropriate locations; and
5. to formulate an integrated plan of development of agricultural and industrial sectors of the economy of the area for achieving self-sufficiency in food grains, better standard of living, and better occupational opportunities.

Methodology

The data required for this study were collected through various questionnaires developed by the author which were administered in all the 120 inhabited settlements. The secondary data were collected from various official sources at block, tahsil, and district levels.

The levels of functional hierarchy were established on the basis of the median population thresholds of 39 functions, which were considered for this exercise. A three-tier functional hierarchy emerged. Functions of each level were awarded appropriate weightages and centrality scores of all settlements on the basis of functional complexity were ascertained. The 'space preferences' of the people were analysed at all the above mentioned three functional levels, which depicted cluster of settlements dependent on specific centre at each level. This helped in identifying the central places and delineation of their service areas.

The space preference depicted the three-tier hierarchy of settlements and those at level III were classified as 'development point', at II level as 'service centre' and those at I level as 'central village' for the purpose of this study. The rest of the settlements are either self-sufficient or dependent villages.

The adequacy and inadequacy of services in a sub-region based on the 'standard' of the services in the regional context indicated the functional gaps. The deployment of functions/services in these gaps was suggested for achieving a better functional integration in the study area. An integrated plan for agricultural and industrial development has been formulated on the basis of projected population, projected food requirements, planned infrastructure facilities, available resources, present and planned spatial organization etc.

Findings

Out of 120 inhabited settlements, 1, 3, and 14 were found to be at III, II and I levels of functional hierarchy respectively. Fifteen settlements are self-sufficient and 91 are dependent. The three central places of II level have been found suitable for planning purposes.

On the critical examination of functional gaps, 55 settlements have been proposed for deployment of various functions. The deployment of these functions at proposed locations will achieve a better 'standard' in the sense that the gaps between the developed and underdeveloped parts will be reduced to the maximum possible extent.

The deployment of new functions will also raise the status of certain centres. Four such centres have been identified as prospective 'central villages' and 2 centres as prospective 'service centres'. The spatial organization of central places for A.D. 2001 has also been planned in which the number of central places have been suggested in the progression of 1:5:18 from III to I level respectively.

The success of above growth centre approach of integrated area development depends much on ideal network of roads. Thus, it is proposed that all the dependent villages be connected with their central villages at least by katcha roads. The links, which are weak or absent between the central villages and their respective service centres, as indicated, must be completed by constructing about 31 km of pitched or non-pitched metalled roads. The metre gauge railway line, serving the area, should be converted into broad gauge as early as possible.

The projected population figures reveal that the area under study will have to cater to the needs of additional 52,100 persons by A.D. 2001. The projected food requirements reveal that at the present rate of agricultural production, the area will be facing a deficit of 13,370 tons of foodgrains. Not only this, even the labour force in 2001 may rise to 17,951 persons more than what it was in 1981.

It is concluded by a critical review of agricultural sector that the area has more or less exhausted its soil resources and has become almost stagnant. However, the following measures have been suggested to raise the agricultural production:

1. If proper efforts are made, at least about 1,108 hectares of additional land may be brought under cultivation and 6,622 hectares under double cropping raising the gross cropped area to 23,752 hectares. It is essential, for achieving this, to raise the irrigational potential to about 19,199 hectares by A.D. 2001.
2. The suggested crop rotation should be adopted to raise the agricultural efficiency to some extent and to avoid the practice of keeping the land fallow.
3. In view of the above changes, an alternative cropping pattern has been suggested to achieve the objective of food self-sufficiency and future calory requirement of the population in A.D. 2001.

4. The appropriate location of centres have already been suggested in connection with spatial and functional organization planning for the effective distribution of fertilizers, seeds, pesticides, implements, and other agricultural overheads.
5. Social forestry and dairy farming can play a very big part in improving the economy of the farmer. In the study area, about 2,735 hectares of land may be available for social forestry. It will be advisable to establish two milk collecting centres, one each at Bariha Hardo and Pindi.
6. It is suggested that 'hiring centres' of agricultural implements and 'maintenance cells' in public or private sector should be established at each 'service centre' for the speedy mechanization of farming.
7. The planned agricultural developments cannot be achieved without agricultural credit and insurance and hence 11 additional co-operative societies have been planned and their proper locations have also been recommended.

If the aforesaid are implemented, it is envisaged that the area will have almost 2,440 tons of surplus foodgrains by A.D. 2001. Thus the study area will not only achieve self-sufficiency in foodgrains, but at the same time, agricultural processing and servicing industries will expand all over the area.

The growth centre approach in industrial planning leads to the conclusion that a 'central village' should have rural industries, 'service centre' medium and small scale industries, and 'development point' should have large scale industries for proper integration. Keeping this in view along with the available resources and future requirements, a number of industries of various categories have been recommended and their appropriate locations have also been suggested.

NARENDRA AWASTHI: MARKET TOWNS AND SPATIAL DEVELOPMENT: A CASE STUDY OF BHOPAL REGION OF M.P., University of Bhopal, 1984, *Supervisor*: A.C. Minocha.

The main object of this study is to analyse the role of Mandi towns in the organization of space and the process of development of the regional economy. In the study an attempt has been made to reveal, whether the market towns could become the levers of spatial development of the regional economy. An attempt has also been made to observe the functional hierarchy, economic base of the towns, market potential and the zone of influence of each market town. A few hypotheses have been tested and some statistical measures have been applied in the study. The present distribution of urban settlements in the study area has been compared with the hypothetical distribution or the optimum distribution of such settlements for the same area.

In the study the following hypotheses have been tested through empirical evidences:

1. The location, size and spacing of market towns form orderly arrangement.
2. Market towns form their separate zone of influence and show two way relationship.
3. Agricultural development and political economy of the regions influence the economic base of the market towns significantly.
4. Volume of sale of agricultural goods is a function of gross cropped area and the increasing distance to the nearest market.
5. Functional linkages of the market towns are determined by the services and functions available at the centre.
6. Basically the market towns act as the collection centres of the region but they also provide necessary functions and facilities to the surrounding region.
7. The market towns act as focal points in the region and explain maximum variability in the levels of developments.
8. The comparative potential of the market town is the function of the volume of market arrival of the competitive market centre and inverse of the square of the distance separating them.

Methodology

Simple but useful statistical methods have been used for the derivation of results and inferences. The data were used in the form of percentages and ratios for comparison of different areas and towns. Correlation and regression coefficients have been calculated for the interpretation of degree and direction of the association of variables with the assumption that the variables are associated in linear fashion. Some more sophisticated techniques like multiple regression analysis, gravity model, standardized functional index, Ullman and Dacey's method of minimum requirement and step-wise regression have been applied in the study at various levels.

Findings

The area under study is predominantly agricultural in which the distribution of Mandis is in fact random, with a slight tendency towards regularity of spacing. However, this regularity-cum-randomness conceals various patterns identifiable at different scales. It is revealed from the study that the Mandis are more evenly distributed in the western part of the study area; and most of the Mandis are located on the national/state highways. The interaction between the Mandis and their hinterland can be used as the basis to determine the extent of intermediate urbanization.

Market towns grow to be functionally structured so as to support the marketing process. Three types of agricultural industries are likely to be attracted by proximity to a mandi, namely distributive industries linked backward to agriculture, forward linking agricultural processing units; and storage and warehousing industry.

Market centres do help in reducing the spatial income differential between town and countryside by raising that of rural area. They play a vital role in distributing money within the agricultural sector. Market towns become the centres for the diffusion of consumer durables also. Thus, from the step-wise regression in the study it is concluded that the urban settlements give 87 per cent explanation to the total variance in the spatial development. This leads us to conclude that the market towns play a vital role in the development of space. The market towns can emerge as the levers of spatial development of the regional economy especially when these market towns are optimally distributed over space.

SURYAKANT GANPATRAO KHADKE: A GEOGRAPHICAL ANALYSIS OF VILLAGE AND COTTAGE INDUSTRIES IN KOLHAPUR DISTRICT, Sivaji University, 1984, Supervisor: Mohan Dattatreya Tawde.

The Problem

The study region, the Kolhapur district, lies at the southern end of Maharashtra State. The district has remained on the forefront in every sector of development in the State in the past. It is rich in different physical resources like water supply, soil, forest, and livestock. The resource richness is well supported by an able, efficient, and skilled population. So the district is called as one of the dynamic districts of Maharashtra.

The Kolhapur district is more prosperous in the industrial field. Skilled manpower, resource potentiality, infrastructural facilities and favourable geographical location have provided incentives for the industrial development. The district is known in national and international markets for its industrial products like oil engine, sugar and gur, silver ornaments, and shoes. After Independence, industrial development is accelerated in the district.

The industrial development taken place in the district after independence is almost urban oriented. More than 99 per cent industries in the district are concentrated in the urban areas. This has given rise to the growth of the cities like Kolhapur, Ichalkaranji, Jaysingpur and others. Due to this urban concentration imbalance is created in the spatial development. It has also created problems in urban and rural life in the district.

The rural sector is more affected by this urban development. The problems like low income, unemployment and underemployment, out-migration, decline of

traditional skill and under utilization of resources are common in all the rural parts of the district. Adequate planned efforts have not been made to eradicate these problems in rural sector by any agency.

Objectives

The study of village and cottage industries in the district is undertaken from the following view-points:

1. To take an account of available resources in the district.
2. To study the present village and cottage industries in the district and to find out the prospects of these industries in the district.
3. To evaluate the level of utilization of present resources and to find out the gaps between the potentiality and utility.
4. To suggest the appropriate prospective village and cottage industries based on potential resources for their proper/optimum utilization.
5. To suggest measures for eradication of the ills prevalent in the rural parts of the district.

Methodology:

Since this is a micro level study the data are collected from the cottage to district level. The data were analysed by suitable methods to find out the possibilities of their better and optimum use.

For the primary level data collection purpose, 120 villages were selected by selected stratified sampling method. Every village was visited for the collection of data.

Data regarding the functions of industries are collected from cottage to village level. For this purpose all the nine prominent village and cottage industries are selected. In this context the information is collected from outside also.

For the purpose of secondary data various offices were visited, i.e. Khadi and village Industries Board, Kolhapur and Bombay; Khadi and village Industries Commission, Bombay; Artisans Cooperative Societies, Taluka level; Balutedar Societies and Town Planning Office, Kolhapur.

Findings

Industrial development in the district is uneven and mainly urban oriented. Out of total 6,542 industrial units 6,499 units are located in urban areas and only 43 units are located in rural areas. Rural part of the district is neglected in this new phase of development.

This district is known for its able and skilled population, still the problems like

unemployment, under-employment, rural to urban migration and decline of the traditional skill are common in the rural parts. Out of 25 lakhs population about 81,494 male population is unemployed.

Traditional skill is supportive to many village and Cottage industries in the district. The industries like brick and pottery, linen, basket making, leather goods, and blanket weaving are based on the traditional skill. The district is endowed with a variety of resources which further help the development of Village and Cottage industries.

Out of total land resource in the district about 25 per cent is waste at present. This land can be used for the cultivation of vegetarian species which would support some significant Village and Cottage industries.

The district has a sizeable forest cover with valuable tree species. The forest products like fruits, wood, grass, honey can be utilized for the industrial purpose.

Clay deposits are found in the specific areas in the district due to the geomorphological set up; there is good sedimentation that can support mangalore tile industry.

Livestock resource is an important resource in this district. The livestock products like milk, skins, and hides, wool, bones, and horns can be used in various Village and Cottage industries.

The district has a good network of infrastructural facilities from the view-point of establishment of Village and Cottage industries.

There are about 10,000 units of Village and Cottage industries dispersed throughout the district. But these industries are there only to cater the stray needs of the Villages. Hence this traditional industrial pattern has failed to take optimum benefit of regional resources. Due to this fact almost all of the resources are found to be underutilized or misused.

Forest products like fruits, grass, wood, and honey are not utilized optimally. They have a potentiality to develop different industries.

Livestock products like skin, horns, bones are misused and wasted, that can be used locally in the Village and Cottage industries.

Out of total land about 25 per cent land is not used presently. This land can be used for the cultivation of species which would further help the establishment of Village and Cottage industries.

Clay deposits available in the district are not utilized fully for the purpose of tile manufacturing. There are various pockets in the river basins.

Agricultural products are used fully and hence there is a less scope for Village and Cottage industries on that basis.

From the evaluation of the present utility it is concluded that the resources in the district are either misused or underutilized. These resources are capable to support certain Village and Cottage industries. Considering the available resources in the different parts of the district appropriate Village and Cottage industries are proposed for the different parts. The district is divided into three parts and industries are suggested.

In the west zone sericulture, leather goods, brick and pottery, basket making,

fruit processing, tile making, and bee keeping industries can be developed.

Central zone is suitable for the industries like leather, sericulture, brick and pottery, blanket weaving, skin tanning, and match making industries.

East zone can support the growth of leather goods, brick and pottery, linen, blanket weaving, and skin tanning industries.

G. RAMA RAO: AN INVESTIGATION INTO THE RELATIONSHIP BETWEEN INFANT MORTALITY AND FERTILITY AMONG COUNTRIES UNDER DIFFERENT SOCIO-ECONOMIC CONTEXTS, University of Bombay, 1984, *Supervisor*: K. Srinivasan.

The Problem

Fertility decline in developing countries is the focus of attention in several recent demographic discussions. A number of Latin American and some of the Asian countries have recorded a declining trend in fertility particularly during the period 1965-75. While analysing the determinants of fertility, infant mortality is included as an independent variable. The prevailing assumption is that high fertility is a necessary biological behavioural response to high mortality. This assumption is implicit in the theory of Demographic Transition which states that mortality decline is eventually followed by fertility decline. A review of historical literature broadly suggests that no country has ever experienced a substantial decline in fertility without a major decline in mortality. Historically studies of trends in vital rates emphasize the time lag hypothesis. According to this hypothesis mortality declines typically precede fertility decline, by two or three generations. The conditions responsible for decline in infant mortality rate and fertility in European countries were completely different from the factors responsible for the decline in infant mortality rate in the developing countries. In the European countries the changes in mortality occurred simultaneously with the changes in socio-economic factors. On the other hand, for developing countries, child mortality had declined much faster and went ahead of economic and social transformation of the society, attributable to widespread immunization and public health programmes.

Fertility as well as mortality have a close association with the economic development of any country. Rarely any country has achieved a high standard of living, without experiencing a significant decline in fertility and mortality. On the other hand, the reverse is also the case; no country has achieved a low birth rate in the absence of significant economic growth and or social change. This clearly indicates that the relationship between fertility and mortality cannot be studied in isolation, ignoring the socio-economic factors. The relationships between fertility and socio-economic variables, mortality and socio-economic variables, and fertility

and mortality are investigated separately by several researchers in the past three decades, but so far only a few studies have been conducted to study the interrelationship between fertility and mortality controlling the influence of socio-economic variables. Also, whether such interrelationships have remained invariant over a period of time has not been investigated. There is, therefore, a need to compile and analyse data on the same set of socio-economic variables and their influence on the IMR-fertility relationships at different points of time. Keeping this in view, an attempt was made to study the nature of interrelationships between fertility and mortality levels controlling the influence of socio-economic and health variables for seventy-nine selected countries, covering both developed and developing, at three points of time, namely 1960, 1970, and 1978.

The Objectives

1. To examine the nature of relationships between infant mortality rate and fertility measures controlling for the effects of social, economic, and health variables at three points of time, namely 1960, 1970, and 1978.
2. To study whether these interrelationships are different in different stages of development as represented by developed countries and developing countries.
3. To investigate the nature of lagged interrelationships between infant mortality rate and crude birth rate controlling for the effects of socio-economic and health variables.

Methodology

The lag correlation between fertility and mortality measures are computed using lag periods of eight, ten, and eighteen years. The selected seventy-nine countries include 52 developing and 27 developed countries. The developing countries are classified into two categories: (i) Countries where infant mortality rate is less than 100, and (ii) Countries where infant mortality rate is greater than or equal to 100.

Thus the analysis is carried out separately for the following five groups.

- Group A: All developed and developing countries considered together.
- Group B: All developed countries.
- Group C: All developing countries.
- Group D: Developing countries where infant mortality rate is greater than or equal to 100.
- Group E: Developing countries where infant mortality rate is less than 100.

The empirical analysis is repeated using same operational definitions of the terms, same areal units and conceptual models at the three points of time, that is

1960, 1970, and 1978, to check the consistency of the direction and magnitude of the regression coefficients. The cross sectional analysis is carried out taking the nation as the areal unit.

The list of variables chosen for the study is given below:

A: *Demographic Variables*

1. Infant mortality rate
2. Crude death rate
3. Crude birth rate
4. Total fertility rate

B: *Health Variables*

5. Expectation of life at birth
6. Child mortality rate
7. Per capita daily calorie intake
8. Population per physician
9. Population per hospital bed

C: *Economic Variables*

10. Per capita energy consumption
11. Percentage of non-agricultural population
12. Per capita national income
13. Percentage of agricultural income to total income.

D: *Social Variables*

14. Percentage of children in the age group 5-19 enrolled at primary and secondary levels
15. Percentage of literate population in the age group 15 and above.
16. Percentage of urban population to total population.

The path analysis is applied to find out the direct and indirect effects of 1960 infant mortality rate with 1970 and 1978 crude birth rate by considering selected socio-economic variables. Similarly, the path coefficients and indirect effects of 1960 crude birth rate with 1970 and 1978 infant mortality rates by considering selected socio-economic variables are computed and compared with earlier set. The path analysis is carried out, in order to find out whether infant mortality rate of an earlier period had a greater influence on the crude birth rate of later period or *vice versa*. The analysis revealed the influence of infant mortality rate on crude birth rate in each of the group of countries, particularly in developing countries with infant mortality rate less than 100.

Findings

1. There were significant differences between the developed and developing countries with regard to the mean values and coefficient of variations on fertility and infant mortality levels as well as on a number of health and socio-economic

variables; also, these differentials between the Group E and Group D of the developing countries were striking. Among the developing countries, these wherein the level of IMR was below 100 (Group E) not only belonged to a higher socio-economic status but also were more homogeneous among themselves compared to Group D countries. Thus, it appears that homogeneity on a number of social, health, and economic variables for developing countries can be predicted just on the basis of their IMR values.

2. The correlation coefficients for most of the demographic, health, and socio-economic variables with IMR as well as CBR had shown the same direction of sign at the three points of time for all the five groups of countries. Most of the demographic, health, and socio-economic variables were found to be more strongly correlated with IMR/CBR values for Group E countries compared to Group D countries. This indicates that the health and the socio-economic variables are likely to influence IMR and CBR more strongly only if the countries were able to acquire a certain threshold level of IMR, assumed to be 100 in the present study.

3. Among the developing countries, the variability on CBR explained by twelve predictor variables (health and socio-economic) was found to be higher for Group E countries than for Group B and D countries. This suggests that the health and socio-economic variables had influenced the CBR more in developing countries, particularly in those countries where the level of IMR was below 100 compared to developed countries or other developing countries.

4. A similar relationship had emerged when the contributions of health, economic, and social sets of variables with IMR and CBR were taken into account. The explanatory power of health, economic, and social rates with IMR/CBR for Group D countries (countries more than 100 IMR) was found to be the lowest among all the groups of countries. This result reinforced the earlier finding that the socio-economic variables are likely to have greater influence on IMR/CBR only when the countries had reduced their IMR to a certain level.

5. In terms of higher order partial correlation coefficients it was observed that the partial correlation coefficient between IMR and CBR, after controlling for a set of selected predictor variable, was found to be more among Group E countries as compared to Group D countries at all the three points of time. This result supports the earlier findings that the interrelationship between CBR and IMR is stronger among Group E countries than among Group D countries even after controlling for the influence of socio-economic variables.

6. The path coefficients of IMR on CBR and also of CBR on IMR were found to be positive under different path models, illustrating that the effects of infant mortality on fertility operate both ways. It was observed that the path coefficients of CBR on IMR were more than of IMR on CBR at all the three points of time, for all the group of countries. Among the developing countries, the path coefficients of IMR on CBR and also of CBR on IMR were found to be more among Group E countries, than Group D countries. This reiterates the earlier findings that the influence of IMR on CBR is determined by the level of IMR of that country.

7. It is interesting to note that the correlation coefficients of 1960 IMR with 1970 and 1978 CBRs were more than the correlation coefficients of 1960 CBR with

1970 and 1978 IMR for Group A and Group C countries. This suggests that the infant mortality level has a greater influence on future CBR values, than the latter influencing the former. The higher order partial correlation coefficients of 1960 IMR on 1970 and 1978 CBRs, after controlling for the influence of set of health and socio-economic variables, were found to be more than the partial correlation coefficients of 1960 CBR on 1970 and 1978 IMR values. This was true for Group A, Group B and Group C countries.

8. The path coefficients of 1960 IMR on 1970 and 1978 CBRs were more than the path coefficients of 1960 CBR on 1970 and 1978 IMRs for Group A, Group B, and Group C countries. This result again reinforces the earlier findings that the influence of IMR on future CBR values were more than that of CBR on future IMR values. An important finding from this study was that the path coefficients of IMR on CBR had showed an increasing trend when a large period of 10 years was considered, recording a decline thereafter. The influence of IMR on future CBR, considered as a function of the time lag is found to be a bell shaped curve. It is, however, difficult to pinpoint the exact year when the value of path coefficients of IMR on CBR would be maximum.

In spite of various shortcomings, already pointed out from time to time, the present work has provided enough evidence on the direction of relationship between infant mortality and fertility, particularly among developing countries. There appears to be a strong case for the developing countries with high IMR values to launch on programmes speedily geared towards reducing their IMR levels below 100 in order that the effects of various health, social, and economic variables on fertility decline could become significant. Once the developing countries cross a threshold of IMR of 100, it appears that all further developmental efforts tend towards reducing IMR and fertility.

History

KHANDE KAMALAKAR VINAYAK: SHIVAJI II OF KOLHAPUR (1762-1813), University of Poona, 1979, *Supervisor*: A.R. Kulkarni.

The problem

THE PERIOD 1762 to 1813 covers the historical period between the defeat of the Marathas in the Third Battle of Panipat and the end of the Maratha rule. This period coincides with the rule of Shivaji II of Kolhapur. The kings of Kolhapur saved the kingdom from the clutches of Nizam, Hyder, Peshwas, Patwardhans, Ichalkar-anjikars, Sawantwadikars etc., for a hundred years (1710-1813). The kingdom of Kolhapur was established at Panhala in the year 1710. Since this date Shivaji I, Sambhaji I; and Shivaji II played an important role in the history of Kolhapur and helped to maintain the independence of this state.

At the same time, the loyal officers of the state like Yashvantrao Shinde, Rajadnya, Satwojirao Bhosale and others fought bravely for Kolhapur state. The adopted mothers Jijabai and Durgabai also made the king an able leader of the state. On account of the dominance of the Peshwas there arose many difficult situations against the rulers of Kolhapur. It is therefore interesting to study the relations of the contemporary rulers with the chieftains. The king Shivaji II showed mixed qualities of Shivaji the Great and Shahu the Great in his life. The present thesis aims at bringing to the surface this greatness of Shivaji II.

Methodology

As the period full of historical events related to the Peshwas' rule and the Peshwas being the rulers of India, they came in contact with the native Princes, chieftains,

government officers, Mughal Court, the Court of Hyderabad, Mysore and the foreign settlers like the English and the Portugese. Despite all odds against him, the king of Kolhapur—Shivaji II—remained the pivotal figure and played such an effective role that he proved himself to be a successful politician as well and established the independent status of his state among the surrounding rulers mentioned in the foregoing paragraphs. In order to prove the real greatness of Shivaji II the scholar has followed the comparative method which effectively establishes the ability and greatness of this great ruler.

Findings

After the third battle of Panipat (1761) the Maratha kingdom was maintained by the Peshwas. Similarly, in Kolhapur, the independent status of the state was maintained from Tarabai to the end of Shivaji II. Madhavarao I showed a rare political cunning at the time of the adoption of Shivaji II. But later on there was no unity among the Peshwas and the state of Kolhapur and both the rules came to a natural end.

In the period of Barbhais, Sardars became prominent and the Peshwas only remained the titular heads. But the state of Kolhapur under Shivaji II's able leadership remained an independent and unified state until it was intruded upon by the British rulers and when they did it became a subordinate state of the British Government. Had there been a proper coordination between the rulers of Kolhapur and the Peshwas the domination of the Marathas in the North could have created and developed a similar domination in the south also.

The Peshwas invaded Kolhapur for 25 years (1775-1800) but could not get any decisive victory only because of the active and powerful opposition of Shivaji II and his dominance in the native and the Maratha politics.

The king followed the traditional Hindu culture and offered Dan, Shastra, Vidhi, Inam, Kitab, Saranjam, Vatan etc., to the able persons of his state. They were central to the relationship of the king with his subjects all over his period.

In the period between 1762 and 1813, the Marathas showed tenacity in military campaigns, ambition and bravery under the leadership of Shivaji II. The king created a new generation of warriors' class in the struggle of 25 years with the Peshwas.

The administrative system of the rulers of Kolhapur was similar to that of Shivaji the Great. The Ashtapradhanmandal, a band of loyal soldiers were awarded titles in the Hindu tradition.

With the advent of the English rule in Bengal in 1765, printing press, newspapers, western science, geographical study of India, etc., provided a new way of life to the native states. The king ruled independently up to the end of his life while because of the British rule in India all the native Indian states vanished from the political map of India.

KAILASH NATH MISRA: A STUDY OF THE EDUCATIONAL SYSTEM DURING THE UPANISHADIC AGE OF INDIA, University of Gorakhpur, 1979, Supervisor: S.P. Chaube.

The Problem

The origin of all the world's sciences, cultures, knowledge, wisdom and light may be traced as far back as the beginning of the later Vedic age in India. Gradually the light of the sacred Vedas, the Brahmanas, the Aranyakas, and the Upanishads spread all over the world. The Upanishadic period is generally the time from 1600 B.C. to 600 B.C. The concluding part of the Vedas are the Upanishads. The Upanishads deal with the knowledge which liberates and enables one to gain the Absolute. The number of the Upanishads are many and they differ in their origin, contents, and style. The study has been confined to the educational system as revealed by the thirteen Vedic Upanishads. This study aims to highlight the extent to which the educational system during the Upanishadic age of India had progressed.

Keeping in view the vast field of the Vedanta the study is confined to the 13 Vedic Upanishads which were composed between 1600 B.C. and 600 B.C. The two very important works of the later Vedic age, namely the Brahmanas and the Aranyakas are also not covered in this study.

Methodology

Reference works and original sources are the main source of information.

Findings

1. Only the suitable and willing students were selected by the profoundly illuminated preceptors of the age to continue their study with them.
2. It was the birth-right of the Brahmins to impart instructions to the pupils of the other castes, namely the Kshatriyas and Vaisyas. Only in exceptional cases some Kshatriya kings also imparted the instruction of the Brahmagvidya which they themselves thought that in doing so they were violating the general rules of the time.
3. Coeducation was also practised during the age. The learned men and women could sit together at a place and discuss the various problems.
4. This fact is also made clear that anybody could study in the house of the preceptor irrespective of his caste, creed, and society provided he had developed in him the virtues of a Brahmin.
5. Education was related to the life situations of the pupils.
6. The educational system during the Upanishadic age of India aimed at making an all-round development of the pupils' personality.

7. The system of internal assessment was in practice.
 8. The teacher himself could increase the duration of the studentship; in case his students were not found fit even after living with him for a period of 12 years (the period of studentship).

9. The Upanishads also emphasized the training of the pupils' head, heart, and hands.

10. The modern Indian educationists like M.K. Gandhi, Rabindranath Tagore, Swami Vivekanand, Vinoba Bhave etc. have been fully inspired by the Upanishadic system of education.

11. The code of discipline practised by the educational institutions during the Upanishadic age was very severe. The problem of indiscipline among the students can be eradicated if the modern educators try to study and assimilate the ideals and principles practised by the Upanishadic preceptors.

12. The educational institutions without getting any state's assistance in their financial as well as administrative matters had, no doubt established an unsurpassable record in the history of schools' administration.

13. It is because of their qualities and knowledge the preceptors of the Upanishadic India rank highest among the preceptors of the world.

14. *History*, *Purana*, spiritual knowledge, Mathematics, Chronology, Grammar, Dialectics, Ethics, Astronomy, Military Science, science of snakes, knowledge of portents, etc. were the subject in the curriculum. Besides, the *Para-Vidya* was also taught to the learners.

15. *Srawana*, *Manana*, and *Nididhyasana* were the methods which were adopted by the teachers of the age. Besides, the discussion method, the experimental method, the dialogue method, and the question-answer technique were also used.

16. The present system of education has been affected by the Upanishadic system of education to a great extent. Many of the defects that prevail in the present system can be removed if the existing gap between the theory and the practice is bridged.

V.H. SONAWANE: ARCHAEOLOGY OF THE PANCHMAHALS UP TO A.D. 1484, M.S. University, 1980, Supervisor: R.N. Mehta.

The Panchmahals is one of the districts situated on the eastern border of the Gujarat State. It lies roughly between $73^{\circ} 13'$ - $74^{\circ} 30'$ eastern longitude and $20^{\circ} 30'$ - $23^{\circ} 30'$ northern latitude.

The district Panchmahals originally consisted of five Mahals. After the integration of the Indian Princely states in 1948 the district expanded from five Mahals to eleven administrative talukas, but the old name clings to it because of historical antecedents.

The Panchmahals district was considered *Terra Incognitae* so far as its archaeological wealth was concerned. This is perhaps due to its location, hilly terrain and inadequate system of communication. In spite of this handicap, the previous work, carried out by few scholars like J.W. Watson, G. Buhler, H.H. Dhruva, H. Goetz, R.N. Mehta, U.P. Shah, M.A. Dhaky, S.R. Rao, B. Allchin, and K.T.M. Hegde and others, though very limited, had already revealed various facets of human history and exposed possibilities of many new discoveries. Therefore a systematic survey of the district was a long felt desideratum to build up a chronological sequence of various cultures that existed in the Panchmahals and to establish their relations with the neighbouring areas of the subcontinent.

Methodology

The field work by the scholar, in the Panchmahals, was spread over a number of seasons from 1971 to 1976. Almost every part of the district was explored thoroughly, considering the archaeological potentialities. These fresh explorations brought to light 95 sites varying in nature, throwing light on a variety of antiquities extending from prehistoric to historic periods. The following period-wise classification of various sites will show the richness of the antiquarian remains:

1	Lower Palaeolithic sites	7
2	Middle Palaeolithic sites	7
3	Upper Palaeolithic sites	1
4	Mesolithic sites	34
5	Mesolithic Rock Shelters	6
6	Early Historic sites. (Period I and II)	8
7	Early Historic sites (Period III)	15
8	Mediaeval sites	71

Findings

The recent researches yielded the tools of prehistoric man from almost every part of the district extending from lower Palaeolithic to Mesolithic periods, and this established a fact that the Panchmahals was once the home of Stone Age hunting folk.

The assemblage of Lower Palaeolithic tools revealed two distinct groups. The tools recovered from Tarsang, Madhwas, and Mataria areas formed the first group while the tools collected from Champaner and in its North-Eastern and South-Eastern vicinities from the sites like Champaner, Jhakharia, and Nathakua belong to the second. A number of artefacts of the first group have close affinities with the

Lower Palaeolithic tools obtained from the river sections of Mahi, Sabarmati, and Orsang. They include split pebbles, handaxes and discoids. The group therefore represents an admixture of cruder and finer elements of the Acheulian techniques, as found in assemblages discovered at Pedhamli, Hadol, Valasana, and Bahadarpur. On the other hand, tools of the second group have a preponderance of chopper/scraper complex with some cleavers, handaxes, and large cores. The typology of many of these flake tools resemble that of clactonian flake tools. It is an interesting feature of this group.

Tools of Middle Palaeolithic period are comparatively smaller than the previous group. Tools prepared on smaller flakes and suitable flat-based nodules and to some extent on cores, seem to predominate in this period. The essential process of development is marked by progressive change to a comparatively more use of flake tools, accompanied by a steady reduction in size and selection of a fine grained material for making stone tools. Similarly, an increasing refinement of techniques is manifested in the preparation of the core, removal of flakes and the subsequent reworking of these flakes to produce various kinds of scrapers. This has all the appearance of a slow spontaneous process. Typologically and technologically tools of this period form a separate group and indicate a possibility of their resemblance with the tools of Middle Palaeolithic period found from other parts.

The discovery of blade and burin lithic industry at Visadi of Upper Palaeolithic period for the first time established a cultural link between Middle Palaeolithic and Mesolithic cultures. This is the first district in Gujarat which showed the evidence of this culture. This opens the new line for further investigations in other parts of Gujarat. The flakes, blades as well as cores of this period are much thicker and larger than those of the Microlithic Industry. The technique adopted for making these tools is direct rather than indirect percussion. The assemblage besides the blades includes concave and convex scrapers but artefacts suitable for missile points are completely absent, while the most important feature of the industry is the occurrence of Upper Palaeolithic type of burins in fairly good percentage. The Visadi industry has a marked resemblance to that found in the lower and middle levels of Sangao cave in Pakistan. Allowing for the different raw material it also resembles with the industries of the Allahabad region.

Besides this, few quartz cores, scrapers, blades, and burins found from sites like Satedi (Nathakua), Bhamaria and Rajgadhi of the Panchmahals show some affinities with those of Visadi Upper Palaeolithic artefacts. From Champaner also one fluted core of rhyolite and few broad parallel sided blades were obtained. They should be compared with the Upper Palaeolithic culture of Andhra Pradesh and other sites. But the collection being small, it is not fully representative. These later finds may be regarded as the transitional phase between the Upper Palaeolithic and Mesolithic cultures or they might have been mixed up with microliths due to agricultural activities, as experienced often. Therefore a clear stratigraphic evidence is required to corroborate these tentative conclusions.

The microlithic stone industry of the Panchmahals is truly Mesolithic, based on mass production of parallel-sided flakes and their conversion into various tools.

More than thirty types can be distinguished but more common or typologically distinctive among them are blunted back blades, obliquely blunted blades, notched blades, penknife blades, lunates with blunted chord or arc, equilateral, isosceles and scalene triangles, trapezes, trapezoids, simple or tanged points, borders, burins, and variety of scrapers. The complete absence of pottery in excavated as well as explored material indicates that the assemblage belongs to a pre-pottery mesolithic phase. Another striking feature of the Mesolithic industry is the complete absence of the crested guiding ridge technique. The discovery of bone point from the mesolithic level of the excavated rock shelter at Tarsang, certainly points towards the tradition of making bone tools among the cave dwellers. The discovery of maced head and the presence of hammer and anvil stones also suggested their advanced technical stage. The occurrence of dentallium shell can be interpreted as an import from the region of the Gulf of Cambay. This suggests a possibility of an exchange of goods among the contemporary Mesolithic or Chalcolithic folk, but it requires further extensive survey for further clarity. Over and above, the Tarsang rock paintings depicting figures of deers, rhinoceros and hunters bear strong affinities with the Mesolithic paintings found in rock shelters located in Central India. Some of the Mesolithic people lived in rock shelters while the others might have lived in temporary perhaps seasonal open camp sites on dunes. The charred bones found from the excavated rock shelter lead one to infer that mesolithic man was eating roasted meat of the animals. Few domesticated animal and fish bones point towards the incipient Neolithic way of life. The mesolithic industry of Panchmahals show strong affinities with the tools of pre-pottery phase of Mesolithic industry at Bagor and also with the assemblage of Tilwara, both of Rajasthan, Bhimbetka, and Morhana Pahar group of rock shelters of Central India and Langhnaj, Kanewal, Undrel and few other excavated sites of Gujarat. On the basis of the available dates of the compared sites, the Mesolithic culture of the district could be dated to about 5,000 B.C. to 2,000 B.C.

The remains of Neolithic-chalcolithic or Harappan culture that are seen in the adjoining districts have still not been traced in the Panchmahals, though efforts were made in that direction.

The material remains belonging to Early Historic Period I and II consist of ceramic types like degenerated Red and Black Ware, Red polished Ware, Decorated Stamped and Incised Ware. These ceramic remains are supplemented by the paintings and engravings on rocks, terracotta objects, Kshatrapa coins and structural remains. The antiquity of rock paintings consists of concentric circles and symbols like swastika and tri-ratna. These paintings have close resemblance with those of Bhimbetka, Kharavai, Narsinhagadh etc. located in Central India dated from 300 B.C. to A.D. 100. A terracotta female figurine found from Tarsang excavation reveals distinct similarities with those found from Mathura, belonging to Kushana period. Similarly terracotta bull and parrots obtained from the Tarsang revealed characteristic features of similar terracottas known from Early Historic sites like Nagara, Shamalaji, Taxila, Bhita. etc. Terracotta tablets recovered from Ghoghamba are similar to those reported from Vadnagar, Bhita, Sanghol, Rangma-

hal and Nagarjunikonda dated between first and fifth centuries A.D. The discovery of silver Kshatrapa coins and contemporary brick structures inevitably support the antiquity of the other material remains.

The Early Historic Period III marks a distinct change in certain pottery types. The characteristic wares of this period are Red Slipped ware, Burnished Black ware and Burnished Red ware. These ceramic types seem to be fairly widespread in this region. The copper plates of the time of Toramana found from Sanjeli are of immense historical importance. The Ardhanarishvara image found from Tarsang and Matrukas from Mataria, could be dated to 6th century A.D. show marked resemblance with the sculptures found from places like Shamalaji, Roda Jagat, and Amjhara. Their features reveal uniformity in depiction of images and forge links for art heritage. The Maitraka coins and copper plates also conformed their identity in the Panchmahals. The image of Surya (Jesawada), Ganesha (Nadisara) and few Lilvadeva Jain bronzes are the eloquent testimonies of the late 8th/9th centuries.

The next cultural phase between 10th and 15th centuries, A.D of Medieval period is marked by much increased architectural activities. Numerous relics, mostly in the form of architectural buildings and sculptures, are found scattered in almost every part of the district. During this period relations between Gujarat and Malwa were exceedingly hostile due to constant struggle for supremacy between the Chalukyas of Patan and Parmaras of Dhar. As this area was a buffer zone between these powers it might have exchanged hands. The material remains of this period show the reflection of political and cultural diffusion.

A comparative study of the material remains brought to light by explorations and excavations established that the district did not keep itself aloof from the main currents of the Indian civilization and moved along with the neighbouring regions and thus participated in the development of culture through the ages. The district was not at all backward in any sense; as the people are prone to believe now, but it played its own role in the cultural development of Gujarat State. It was a connecting link between the hinterland of our country and parts of Western India. Due to this feature, the area was in touch with trade, commerce and other cultural and political movements.

LAL DENA: CHRISTIAN MISSIONS AND COLONIALISM: A STUDY OF MISSIONARY MOVEMENTS IN MANIPUR AND LUSHAI HILLS, 1894-1947, J.N.U., 1984, Supervisor: S: Gopal.

The Problem

The primary objective of the study is to examine and evaluate the missionary movement in Manipur and Lushai Hills during the latter part of the 19th century and

the first half of the 20th century from the colonial perspective. This approach is necessary because the missionary movement in North-East India followed closely on the heels of colonial expansion. Soon after Manipur and Lushai Hills were occupied in 1891, the British officials initiated missionary entry into the two regions. It was the Arthington Aborigine Foreign Mission Society, London which, after having laid an enduring foundation both in Manipur and Lushai Hills simultaneously, withdrew later on, by handing over the two fields to other missions. The Welsh Calvinistic Methodists' Foreign Mission Society with its headquarter at Liverpool stepped into the North Lushai Hills; the British Baptist Mission Society, in collaboration with the London Missionary Society, took over the South Lushai Hills while the American Baptist Foreign Mission Society was engaged in Manipur. Later on, Watkin R. Roberts, who had then made Aizawl, the capital of North Lushai Hills, as the base of his operation, had established an independent mission in southwest Manipur hills, having a common boundary with Lushai Hills. For historical reasons, the missionary movements in the two regions were thus closely interlinked.

Methodology

The study is focused on the fact that Christian missions and colonial movement interacted in different forms and at different levels and the degree and extent of this interaction largely depended on the needs of a particular mission and the nature of the colonial situation. The interaction between the two movements was primarily determined by the principle of expediency and it did not involve mutual ideological confluence. This is to say that underneath the apparent alliance between Christian missions and colonialism, there was thus an inner contradiction. Given this basic conceptual framework, two lines of approach are adopted: the first is obviously historical: a historical study of missionary exploits or the proper method of missionization; the second is sociological: how did the tie between missionization and colonization contribute to the changing process of tribal society.

Findings

The Christian missions which might otherwise have disapproved of colonial expansion because of its mundane goals, however, tended to become willing partners when they thought that the propagation of Christian faith might be promoted by colonial support. The colonial authorities also developed the concept of 'civilizing responsibility' in their colonial ventures in the latter part of the 19th century. It was their strategy to try to clothe their enterprise as a divine mission the taking up of the 'White Man's burden' towards the subject peoples. This mutual interaction between Christian mission and colonial politics was at its highest where the two accepted the 'white man's burden' as a genuine responsibility. The officials took the missionary movement as the effective force of colonization, not only

because it did not use force, but especially since it penetrated more deeply into the life of the people. But surprisingly, the local officials in N.E. India also thought in terms of the stabilization of the British empire through the Christianization of a large population of hillmen between Assam and Burma. Given the choice between political stability and Christian proselytism, the government definitely preferred the former. It should, however, be noted that the government was not hesitant to encourage Christian conversion where it would legitimize the colonial control over the subject peoples. As expected, the services which the Christian missions rendered in terms of modern education, medical and other humanitarian works, tended to legitimize colonial rule directly or indirectly.

The evidence in the study shows that the type of relationship that existed between the colonial officials and the missionaries was based on the temporary process of conditional reciprocity. It did not germinate from common ideological confluence, but grew out of necessity and expediency. The moment the missionary movement was thought to be threatening political stability, the government did not show even the least resistance to curb such movements. Conversely, the moment the missionaries also realized that the government was interfering in their religious freedom, they were ready to delink whatever relationships they had with the government.

So far, studying and research which have been carried out on the subject particularly in the North-East, have not adequately delved deep into the secular aspects of the activities of the missionaries. This study is primarily concerned with the secular factors in the process of missionization. Thus, the study not only adds a new dimension to the problem but also sheds new light on the motivations and *modus operandi* of Christian missionaries.

ABDUL ALI ARGHANDAWI: BRITISH IMPERIALISM AND AFGHANISTAN'S STRUGGLE FOR INDEPENDENCE, 1914-1921, J.N.U., 1984, *Supervisor*: M. Zuberri.

Findings

The Second decade of the 20th century witnessed extensive European design on Afghanistan. With the outbreak of the First World War, the Germans tried their best to bring Afghanistan on their side. They wanted to send the Afghan army and the Pathan tribesmen to attack the plains of India. Their objective was to divert the flow of British manpower from the war theatre in Europe. Amir Habibullah was fully aware of these motives in dragging Afghanistan into the World War. He told the British Agent in Kabul, Hafiz Saifullah Khan, that his neutrality enabled the British to concentrate all their manpower on the main theatre of conflict in Europe. When

the Ottoman Turks entered the war and sided with Germany, the German designs received powerful support. Armed with a declaration of *jehad* against Britain, it was easier for the Turks to incite the religious leaders of Afghanistan and the frontier tribes. The British realized the seriousness of the Turkish involvement in the World War from their imperial perspective. This alignment would have been a direct threat to British rule in India. The British made every possible effort to keep Afghanistan neutral. While informing Amir Habibullah that Turkey had entered the War on the German side, Lord Hardinge assured him that the War was not a religious crusade, that the religious places of Muslims were safe, and that the Russians had also given assurances to this effect.

The Germans had already hosted an Indian Revolutionary Centre at Berlin. Through this prominent centre, Raja Mahendra Pratap and Maulavi Barakatullah encouraged the German Foreign Office to send a Mission to Afghanistan, consisting of Germans, Turks, and members of the Indian revolutionary group. The idea was approved by the German Foreign Office and a mission left for Afghanistan to join hands with the Central powers; in return, the Afghans were to get their territory lost to the British in the 19th Century. The Indian revolutionaries, in their eagerness to hasten the independence of their country, even went to the extent of accepting the Amir as the ruler of independent India.

The Afghans, who were under the influence of the *mullahs*, wanted to join the Turks against Britain. The Afghan nationalists, led by Mahmud Tarzi, also wanted the Amir to join the War. He considered the world war as golden opportunity to make Afghanistan completely independent. But the Amir knew that his country could not challenge the British Empire. The Germans were giving promises of financial and military support from the Central powers. The Amir, however, knew that the Germans could not make their way into Afghanistan to assist him in invading India. It was physically impossible for the Germans to render any tangible military support to Afghanistan. Iran was under the British and Russian control. The German envoy after a brief stay in Kabul left Afghanistan in disgust.

The Indian revolutionaries, with the help of high ranking Afghans like Sardar Nasrullah Khan, Prince Amanullah, and Mahmud Tarzi, on the one hand, and frontier Pathan leaders, within Afghanistan and independent British territory, on the other, tried to bring an end to British rule in India, and to secure Afghanistan's independence. The Indian revolutionaries in Afghanistan were led by Raja Mahendra Pratap, Maulvi Barakatullah, and Maulavi Obeidullah. The Afghans fully supported the establishment of the Indian Government in exile. Sardar Nasrullah Khan congratulated Raja Mahendra Pratap on his appointment as life President of this government.

The Amir's declaration of neutrality in the First World War was made in spite of strong pressures, domestic as well as foreign, in favour of a strong anti-British posture. His neutrality was considered to be a pro-British policy; it discredited him in the eyes of his own people. Eventually it led to his assassination. He was succeeded, after a short interval, by Amir Amanullah. Meanwhile the Russian Revolution in 1917 gave a new dimension to the Afghan struggle for independence.

The proclamation of the new Bolshevik Government, in which it declared its support to all those peoples in the East who were under British Imperialism, was widely circulated and appreciated. The British Indian Government considered this a greater threat than the military designs of the old Tsarist regime. Propagation of subversive ideas was more dangerous than old-fashioned military plans of a crumbling empire. The British rulers of India took a serious note of the threat posed to their imperial structure in Asia.

Amir Amanullah was anti-British and was recognized as the leader of nationalist forces in Afghanistan. On the very first day of his reign, i.e. 28 February 1919, he declared that Afghanistan should be free in her domestic and foreign affairs. The Amir was encouraged to take this stand because of the political unrest in the Punjab and in the rest of India as well as the military complications facing the British Empire. In a letter of 3 March 1919, he informed the Viceroy of his accession to the Throne of independent Afghanistan. The British Indian Government acknowledged this letter after a delay of 42 days and deliberately ignored the assertion of Afghanistan's independence.

The British were afraid that a free Afghanistan would act as bridge for Soviet influence threatening British rule in India. Meanwhile, on 27 March 1919, Soviet Russia recognized Afghanistan's independence and letters were exchanged between Lenin and Amir Amanullah. An Afghan delegation led by Mohammad Wali Khan left for Soviet Russia in order to establish neighbourly relations between the two countries.

Anglo-Afghan relations deteriorated steadily and on 7 May 1919, the Third Anglo-Afghan War broke out between Afghanistan and British India. Though the war was between two unequal powers, the Afghans were supported by local population and the Pathans of the North West Frontier. The Afghans could manage to defeat the British army in the Kurram Valley and this was the main reason that the British stopped their advance in the Torkham area where they were successful. Though the British had an upper hand in the Chaman and Chitral areas, they were equally keen to have a settlement. The Amir realized his extreme vulnerability vis-à-vis the British Air Force, by which his own citadel in the heart of Kabul was bombarded. Both the parties wanted to end the war. A ceasefire was, therefore, quietly accepted.

The successive conflict with Afghanistan made the British authorities in India aware of the need for a strategically impregnable frontier, which, in their view, could be established only at the cost of Afghan territory. After the First Anglo-Afghan War, the British military circles in India suggested the establishment of a frontier, which would enable the British to have an upper hand in their struggle with Afghanistan. The occupation of Kandahar, with a railway to the Helmand, was suggested after the Second Anglo-Afghan War as essential to a 'scientific' frontier. During the Third Anglo-Afghan War, the British military authorities regarded the occupation of the Jalalabad Valley as a desirable objective. But in both the cases the home government was reluctant to sanction the order, as in both places the British would have faced hostile tribes.

While declining to sanction the occupation of territories which would have created acute administrative problems, the home government favoured the adoption of a strategic frontier providing the British the maximum offensive capabilities. The most important frontier where the British wanted rectification was within the Khayber and New Chaman areas. Their importance was due to the fact that both these places had rail links and, with a British rail terminus in the region, the British could control the plains leading to Jalalabad and Kandahar. At no other point beyond Landi Kotal was it physically possible to form a rail head. It was suggested that Dakka was the best place to be used as a rail terminus.

In the Chaman areas, the frontier lay closer to Khawaja Amran hills. It had little space to concentrate a railhead out of the striking distance of the enemy. Thus, the railhead was within artillery range from Afghanistan. The British reached the conclusion that New Chaman with a rail head was the proper place for their operation.

The capture of the Boldak fort in Afghanistan was considered essential for making a strategically sound frontier in the Kandahar zone.

The British position from strategical point of view was much more weak in the southern front than in the other two zones. The Khost region had given the Afghans an upper hand and they could strike in the northern, southern, and eastern directions. Nadir Khan had benefited from this position in the Third Anglo-Afghan War and had successfully captured the Thal and Wana regions.

After the conclusion of the Third Anglo-Afghan War, the British wanted to impose their own terms on Afghanistan and to modify the frontier in accordance with their military requirements. Since the Afghans in the southern front were successful and managed to drive away British troops from their posts, the British could not impose their terms to provide for a strategically impregnable frontier.

The British Chief delegate at the Rawalpindi Conference, Hamilton Grant succeeded in obtaining territorial concessions in the Khyber region. According to Article IV of the Rawalpindi Peace Treaty, the Torkham boundary between the two countries was to be demarcated with the Torkham area to be brought under British control. Grant had used the threat of a complete breakdown of negotiations in order to obtain the concessions which the Afghan delegation had no authority to make.

The British rulers of India reluctantly agreed at the Rawalpindi Peace Conference to recognize Afghanistan as an independent country. A letter to this effect was issued by the Chief British delegate. The conclusion of a treaty of friendship was, however, postponed. The British imposed certain conditions to be fulfilled by the Afghan Government before such a treaty could be concluded. The Amir was to demonstrate his friendship by dismissing all hostile foreigners from his country; his foreign relations were to be exclusively with the British Indian Government; all Indian revolutionaries were to be expelled from Afghanistan; and the position of the British agent at Kabul was to be improved. Thus the British had imposed their stiff demands on Afghanistan as precondition for the conclusion of a treaty of friendship. It was stipulated that the two parties would meet after a period of six months; the

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treaty would be concluded only if the Afghans met the British demands and did not instigate the tribes. These conditions were not fulfilled by the Afghans.

By the time the stipulated period of six months was over, the World situation underwent a radical change. There was an erosion of British influence in Asia as a result of a series of developments in the region surrounding Afghanistan. Soviet Russia had stabilized its position; by April 1920 the counter-revolutionaries had been defeated. The policy declarations made by the Bolshevik regime had enhanced its influence in Persia and Afghanistan. These developments had an adverse impact on the British imperial structure in Asia. Moreover, the Indian national liberation movement had entered the Gandhian phase, further eroding British position. The *Khilafat* movement and the Punjab disturbances resulted in a wave of anti-British sentiment. Gandhiji's support to this movement marked a turning point in the political history of India.

These developments influenced the British position towards Afghanistan. Although the Afghans had failed to act according to the British demands at the Rawalpindi Peace Conference, the British considered it prudent to discuss the matters once again with the Afghans. This changed attitude was due to the urgent British need to tide over the critical period of summer in which the British were apprehensive of tribal unrest. The British also wanted to re-establish contact with the Afghans in order to blunt their hostility. Thus a conference was held at Mussoorie which lasted for four months. The conference was in the nature of a holding action to give the British Indian Government sufficient time to tide over its internal crisis. They succeeded in suppressing the non-cooperation movement in India. The Hijrat movement, which was at its peak during the Mussoorie Conference, had collapsed by the middle of August. The British were in a strong position once again. It was now the turn of the Amir to request the despatch of a British delegation to Kabul.

The main British worry was the prospect of the conclusion of a treaty of friendship between Afghanistan and Bolshevik Russia. That the British took this new threat seriously is reflected in their cautious dealings with Afghanistan. Once Afghanistan had established friendly relations with the new regime in Russia, the British decided to contain Bolshevik influence from spreading into Afghanistan and from there to their Indian dominion. A Soviet delegation had already lengthy discussions with the Afghan Government in Kabul. The proposed treaty, which was still a closely guarded secret, was supposed to contain some anti-British provisions, such as Soviet financial assistance and the establishment of Russian Consulates in Eastern Afghanistan bordering British India. The British delegation led by Dobbs was sent to counter Russian influence and to consolidate British position in Afghanistan. The Secretary of State for India demanded disclosure of the treaty as a pre-condition for the conclusion of an Anglo-Afghan treaty. The British Indian Government, on the other hand, did not consider it a paramount necessity; they were confident that a treaty incorporating the main British demands could be signed without insisting on the disclosure of the Soviet treaty. The negotiations for an Anglo-Afghan treaty covered a period of one year.

The British objective remained the same — to safeguard their Indian Empire by controlling events beyond its frontier; their tactics changed with the changing circumstances. They were obsessed about the North West Frontier of their Empire. It was this obsession which resulted in three Anglo-Afghan Wars in less than a hundred years. It was only when they were beset with problems that they showed any consideration to the Afghan sensibilities.

Faced with its military weakness, Afghanistan relied on the bravery of its people and the sympathy of the Pathan tribes inhabiting its frontier with British India. Successive Amirs used their leverage over the frontier tribes to blunt British power in Afghanistan. The national liberation movement in India provided Amir Amanullah an additional instrument to coerce the powerful British rulers of India. He extended support to the Indian nationalists, encouraged the establishment of a Provisional Government of India in exile in Kabul and gave material and moral support to the Indian revolutionaries who had migrated to his country. Thus the peoples of India and Afghanistan were brought together in their common struggle against British imperialism.

The British, however, quickly reasserted their authority. They made minor concessions and temporized for more time to consolidate their position within India and in the neighbourhood of Afghanistan. The Indian revolutionaries suffered a setback, Amanullah was no more and the British dominion in Asia was still intact. The Russian Revolution, however, had been consolidated and the British Empire in Asia faced a more serious threat. It was necessary to make some concession to Afghanistan. The concession was finally made in the form of a treaty of friendship recognizing the independence of Afghanistan.

Law

MOHD. ALTAF HUSSAIN AHANGAR: CUSTOMARY SUCCESSION AMONG MUSLIMS IN KASHMIR: A CRITICAL APPRAISAL OF JUDICIAL INTERPRETATION, A.M.U., 1983, *Supervisor*: Syed Misbahul Hasan.

The Problem

THE SUBSTANTIVE law applicable to the succession of the estate of a deceased Kashmiri Muslim purports primarily to be the Muslim Law and in case the custom in modification of personal law is proved, then the rule of decision is customary law. The problem, however, is that the Muslim law or customary law regarding succession as applied by Civil and Revenue courts from time to time is so different both in spirit and content from the real Muslim law and customary law that both have, one must admit, ceased to be the law they purport to be. These trends have led to trichotomy as to rule of decision in Kashmir.

The study is an attempt to examine the rules of customary succession applicable to a Muslim in Kashmir, to compare them with the existing rules applied by Civil and Revenue courts of Kashmir and to discuss in what material way they have been departed from. The study is confined to the substantive customs taking up the customs from the point where funeral expenses, debts, and bequests have been paid and a net estate is available for succession.

Methodology

The study is based on traditional materials for legal research. Sant Ram Dogra's

Code of Tribal Custom in Kashmir forms the solid base upon which the edifice of this study has been erected. The other printed material which has been consulted for Kashmiri custom is Nila Kanth Ganjoo's *Digest of Customary Law in Kashmir* and Syed Ali Hamdani's *Makhzani-Intiqalat-i-Haqiyat*. The decisional material, consisting of all relevant reported and available unreported cases of Jammu and Kashmir High Court, have been examined so as to identify, isolate and spell out the misconceptions and inconsistencies which have crept into the customary law of succession. In view of Revenue Courts being the real customary law appliers, it was decided to undertake a detailed examination of the decisions of Financial Commissioners. Being, however, not a Court of Record, the study is confined to the decisions available in Financial Commissioner's office on the subject. Since there is a racial and customary identity, the available books on customary law of Punjab and the principles expounded by the courts on Punjab customs have been included to put the study in correct perspective. Wherever found indispensable, support has been lent from the judgements of the Supreme Court and Privy Council. The relevant statutory law to identify the place which has been assigned to custom and customary institutions in Kashmir has also been examined.

Findings

The salutary legal principle that whether the parties are governed in matter of inheritance by personal law or customary law must be enquired into before the distribution of property among the heirs, is ordinarily ignored by Civil and Revenue Courts at subordinate levels. Even simultaneous application of both customary law and personal law is pleaded by the parties and our higher judiciary has the reputation of judicially endorsing such a contention. Same families have been governed by customary law and Muslim law of inheritance at different times. Application of the customs has been extended even to those cases where parties stand admittedly excluded from customary operations by *Code of Tribal Custom* and Judicial pronouncements.

Cases are before us where the Revenue Officers particularly at subordinate levels have excluded the real heirs from succession by omitting their mention; devolved the property of living persons; mutated doubly and trebly the same property; misconstrued the deceased persons; misread the *Code* entries; and even while mutating property situated at different places, different rules of customary law have been applied to the same persons. The main reason for this judicial confusion is the insufficient legal knowledge and acumen of even the highest Judicial and Revenue Officers.

The entries in Sant Ram Dogra's *Code of Tribal Custom in Kashmir*, which have been sanctified by judicial interpretation off and on, suffer from inconsistency and ambiguity. Ganjoo's work on customary law is mainly based on unacknowledged borrowings from Rattigan and Courts suffer from the fallacy of treating it as an authoritative source of Kashmir customary law.

There are definitely some customs in Kashmir which can hardly withstand the test of constitutionality. The Directive Principles of State Policy of Kashmir Constitution do not impose any obligation upon the State to strive for a uniform civil code. Hence, it is not within the domain of our judiciary to advocate for such a code.

In the face of unambiguous terms of section 4(d) of Jammu and Kashmir Law Consolidation Act, 1977 B, the Courts have again erred in saying and suggesting for enactment of law for purposes of clearing the first rule of decision.

Customary heirs can be classified into two groups which may be called respectively *the familial heirs* and the *institutional heirs*. The former heirs are those who normally succeed the deceased under customary law while the latter heirs are those who do not succeed the deceased by virtue of any inheritance rights but because the deceased, during his life-time, has conferred a customary status upon them by virtue of which they inherit. Familial heirs can be sub-divided into (a) primary heirs, (b) secondary heirs. All primary heirs succeed simultaneously. As a whole group, the secondary heirs are totally excluded from succession by primary heirs. The secondary heirs are sub-categorized into five categories of heirs wherein the heirs in the earlier category exclude all heirs in the latter categories. The heirs within a particular category inherit simultaneously.

Kashmir customary law for succession recognized rights of representation among male agnatic descendants and collaterals. This sound proposition of Kashmir custom has been ignored by the judiciary under the influence of 'nearer in degree excludes more remote' rules.

The judicial dilemma is further confounded by (a) conferment of absolute property rights on unmarried daughters under custom; (b) seeing unanimity between the definitions of 'agnate' under Muslim law and custom; (c) treating females as agnates; (d) recognizing inheritance rights of *Khana berun* daughters; (e) misconstruing *khana nishin* daughter as equal to a son under Muslim law for inheritance purposes; (f) inventing the concept of non-*khanadamad* husband of a *khana nishin* daughter; (g) recognition of widow's power of alienation for legal necessity under custom; and (h) failure to distinguish between the institution of 'appointment of heir' and 'adoption'.

In a present complex Kashmirian society, the application of even the pure customary law of succession tantamounts to social injustice and violation of constitutional guarantees. At present, as such Kashmiri succession customs must be replaced by Muslim law, the principles of which are certainly more just and equitable. A law on the lines of Muslim Personal Law (Shariat) Application Act, 1937, should be enacted in the state. It must apply even to agricultural land and should recognize the inheritance rights of orphaned grand children in the light of reforms introduced in Egypt, Tunisia, Morocco, and Syria.

D.R. SAXENA: OMBUDSMAN: REDRESS OF CITIZENS' GRIEVANCES IN INDIA, University of Bhopal, 1984, *Supervisor*: P.L. Shriwastava.

The Problem

Perhaps in the last thirty years, the most striking feature in the search for more effective remedies for corruption, maladministration and also for many other ills has been the discovery of an institution which is commonly known as "Ombudsman".

Ombudsman—an institution which has long been established in Sweden (1809) and adopted more recently in other Scandinavian countries (Finland 1919, Denmark 1955, and Norway 1962) has now become of interest to various other countries. By now many countries have imported and established this institution as a part of the machinery for prevention of corruption and remedy of maladministration and many have come to the conclusion that the creation of an Ombudsman is the only way out. Lately, there has been a widespread adoption of this institution especially in Commonwealth countries among which U.K., New Zealand, Canada (in Provinces), Australia (State level), Ghana, Fiji are notable. Broadly speaking, nearly forty Ombudsmen are functioning in various countries which clearly established the growing popularity of the Ombudsman.

Findings

Advantages

1. From the citizens' point of view, this system is simple and cheap. The striking advantage of the Ombudsman is that he can go behind the screen and investigate fully all that has happened in the case and that he does this as an independent and skilled authority. This is something which a Court, Tribunal, Parliament, or even a Member of Parliament cannot do, because of their own limitations and variety of other reasons.
2. Even mere existence of an Ombudsman gives a feeling of security to the citizens. It has a psychological value. His office gives the citizens confidence that there exists a watch-dog for them. Simultaneously, they will have confidence in the Government which has appointed this independent officer to ensure the rule of law and the protection of rights.
3. The Ombudsman gives the citizens an expert and impartial agent without personal cost to the complainant, without the tension of adversary litigation, and without requirement of counsel or intervention of those who are highly placed.
4. There are a number of cases where the law provides no remedy for an aggrieved party. Though the administrative agencies may have within their

structure, channels for handling complaints but such a system generally lacks impartiality. The appeal system, if one exists, is expensive and time-consuming. The office of Ombudsman is proving an ideal institution to secure complete justice to the aggrieved person in such cases.

5. Every democratic government is facing the evil of corruption, nepotism in whatever state it is practised and at whatever times. The institution of Ombudsman has proved itself that it has a capacity to check these evils. In spite of the fact that generally Ombudsman's opinions are not made binding on the officials, but in practice they are treated as very much binding. Thus, whenever an adverse opinion is expressed by the Ombudsman against an office or official it causes a quick and excited reaction amongst all the officials.

6. While making sure that Government agencies do not abuse their power and discretion or exercise it in unreasonable way, the Ombudsman's findings protect the agencies against unjustified complaints. The civil service in New Zealand has come to regard Ombudsman as a defence against unjustified criticism rather than as an enemy.

Functions

Generally speaking, he has no authority to reverse, alter or annul a decision or to take disciplinary action. His only weapons are 'admonitions' and 'suggestions'. His mere existence serves a lot. He may recommend an appropriate change in the law or rule that caused the complaint to be made. And his ultimate weapon is his 'Report' to Parliament in which he brings the grievances to the attention of all concerned and recommends that it be redressed.

Generally, Ombudsman in all other countries—where it is in operation—have powers to advise and not to decide. But in Sweden and Finland they have a power to act as a public prosecutor, suing the public servants in general courts and demanding punishment and sometimes damages. In Denmark and Norway prosecution by the Ombudsman is regarded as exceptional and in New Zealand and Britain no such power is vested in him. From the beginning, in Denmark and Norway the essential form of intervening has been the same. The Ombudsman has only to "express his opinion". So is the position in Britain and New Zealand. But it seems that throughout Ombudsman's opinions, even if they are not of binding nature, do carry a heavy weight as they are treated as binding by all the concerning persons.

Frivolous Complaints

In every society there are a large number of persons who enjoy making fuss and they are less happy when other people remain undisturbed. One party or group is more worried when the other is in a comfortable position. This sort of attitude or habit compels them to lodge frivolous complaints. The Ombudsman may decide not to proceed with a case if he believes the complaint to be frivolous or not made in good faith, or designed to attack a person rather than to criticize an action. Ombudsman

can advise complainant in such cases to cease baseless attacks on department or officials.

Besides all this, the other important thing is that this institution should not be put in operation more often than necessary and that when it is put in operation every possible safeguard should be provided to protect the innocent officials who may be caught up in it. This step on one hand limits the number of complaints, and on the other it will generate a co-operative attitude among the officials.

Proposed Indian Ombudsman

In India there is no Ombudsman at the Centre though this institution exists in the name of Lokayukta in various States. Compared to similar institutions abroad, both in continental and Common law systems, Lokayukta is significantly limited both in scope and effectiveness. The working of the existing Lokayuktas, though within a very restricted frame of reference, has fully demonstrated that if it has to become a really effective safeguard for the citizens against administrative abuse the institution needs to be reformed.

Responsible to Legislature

The countries which have adopted this institution have treated Ombudsman as an independent officer, in most instances responsible to Legislature, who investigates citizens' complaints against Government departments and agencies. Since there is no convincing reason to depart from this view, this country should have an Ombudsman who is responsible to Legislature.

Separate Ombudsman for separate field

Since India is a big country, efforts should be made for having specialized Ombudsman on the U.K. pattern. In the U.K. there are separate provisions for Health Service and Local Administration in addition to one for Civil Affairs. Instead of including local administration and Health Services into the Lokpal's province, we should have separate Ombudsman for these departments as well as one separate for military affairs. If all these functions are combined together and are given to one man and or the same Ombudsman, it may prove unwieldy. The Ombudsman for Civil Affairs should be the overall in-charge of all other Ombudsmen. If, because of certain reasons, separate Ombudsmen are not possible or feasible, then except Ombudsman for Civil Affairs, others can safely be designated as Up-Lokpal or Deputy Ombudsman. To begin with, nationalized industries and other statutory agencies should be given to the Lokpal for civil affairs and in due course of time, separate provisions should be made for these departments. Affairs relating to Police and prison administration should be included in the jurisdiction of Ombudsman for Civil Affairs with a special reference. A separate Ombudsman for Consumers on Sweden's pattern should also be appointed.

Appointment by the Committee of Legislature

Ombudsman should be the creature of Legislature. But in India the mode of appointment as sought through the Bills suggests that Lokpal, if appointed would have been the creature of Government. Lokayuktas in States are definitely the creatures of the Chief Minister of the State concerned. There is no Lokpal at the Centre, but there are Lokayuktas in various States. Chief Ministers have played an important role in appointing Lokayuktas. They have appointed persons of their choice to the office. This practice should be done away with immediately. In New Zealand, the Ombudsman is appointed by the Governor General, but he acts upon the recommendation of the Legislature. The Ombudsman in Denmark, Finland, and Norway, are elected by the respective Parliaments. The Swedish Ombudsman is chosen by forty-eight electors drawn from the two chambers of Parliament and reflecting the proportional strength of all the parties represented there. Thus, by and large, practice is that the Ombudsman is selected by the Legislative bodies. In Finland, the party that is in control at the time proposes a name, the opposition parties propose another name, a secret ballot is taken without discussion and the controlling party's nominee is the winner. The Ombudsman which is the product of all party consensus, in other words, those who have been elected without opposition have proved better than those who were not elected so. Thus the best practice would be to have Ombudsman selected by a Select Committee of the House (both Chambers) constituted on proportional strength of all the parties in the Parliament.

Selection

While selecting a person to the post, some basic qualifications such as fair-mindedness, human touch, enthusiastic attitude, and a passion for justice should be given due weightage. Many judges, jurists, and civil servants may have these qualities. The impartiality of persons belonging to a particular political party is likely to be doubted and the retired persons can have a soft corner for the Government. Therefore, they need not be considered for the post. Therefore, Ombudsman should be so carefully selected that there should never be a doubt on his honesty, integrity, ability or motive. Finding such a man who is above all suspicion is a difficult task. This is indeed to ask for perfection, or pretty close to it. But it should be aimed for. The 'man' as Ombudsman in Sweden has never been doubted in all the last 170 years. We too can get a person provided we are really honest in our efforts. In Scandinavian countries, a law trained person is preferred. In Soviet Union the highest lawyer becomes the Procurator General. Other Members in Procuracy are also drawn from the persons who have higher legal education. In the U.K., first Parliamentary Commissioner was Comptroller and Auditor General—a civil servant—and in Denmark Professor Stephen Hurwitz was the professor of Criminal Law at the University of Copenhagen when elected as the Ombudsman. The 'man' as Ombudsman in the above countries have never been doubted. Thus only requirement is to make sincere efforts in selecting a suitable person.

Terms of Appointment

Provisions relating to the appointment of the Ombudsman should not be made in such a way as would attract only retired or semi-retired persons. A close study of the 1977 Bill and various State enactments providing for Lokayuktas reveals that the intention is to utilize the services of retired persons only for the office of Ombudsman. Furthermore, after serving for a few years the retired Lokpal was contemplated to live in an obscure life, i.e. without any business or connections whatsoever. Therefore, it is suggested that provisions should be made so that even young (obviously not too young) and energetic persons are eligible for this office, and after their retirement from the post of Ombudsman they are not unduly restricted from accepting other befitting assignments. If for the reason of independence they are to be debarred from occupying any other office, then provision should be made for the payment of pension equal to the pay which they were getting at the time of retirement. Since limiting their appointment to one term is not reasonable they should be considered for second term also.

Staff

(i) *Selection of Staff*: Utmost care should be taken in the selection of Ombudsman's staff. Dishonest personnel will tarnish the image of the institution. Successful working of the Ombudsman institution largely depends on the working of office staff. As far as possible, police personnel should not be associated with the functioning of Ombudsman. At present Vigilance Commissions are working with the active collaboration of the Police Département. Police is already in the limelight for its deeds. Therefore, people should not be given a chance to call the Ombudsman's office a new Vigilance Commission. Experience of Maharashtra and other Lokayuktas suggests that the Lokpal should be given supporting staff in adequate number with whose help he can also conduct investigations without having to depend on Police personnel.

(ii) *Qualifications*: The same considerations which are to be applied in the selection of Ombudsman should also be applied in the selection of his staff. Civil servants and persons well versed in legal affairs should be given responsibility to share the task before the Ombudsman. The number of persons to be appointed on the staff should be left to the discretion of the Ombudsman and in selecting his staff he should be allowed complete independence of the executive. In order that he may be able to function independently of the executive, the expenses relating to establishment of his office should be passed by the Legislature in the same manner in which the budget relating to the High Court is passed without being subjected to any discussion in the House. His salary should not be varied to his disadvantage during his tenure. Provisions regarding his removal or dismissal should be the same as applicable to a High Court Judge.

Implementation of Recommendations

One is aware of the fate of inquiries conducted by the various inquiry-commissions appointed at Central as well as State level. In most cases such reports being of advisory nature, remain unimplemented. Therefore, all necessary efforts should be made for seeing that the reports and recommendations of the Lokpal or Lokayuktas are complied with by the concerned Governments and where they have any difficulty in doing so, they should invariably give reasons for non-compliance. It should then be open to the Lokpal or Lokayukta to comment on the reasons stated by the Government.

Procedure for Investigation

At present there is no set formula for investigating complaints. A simple and short procedure should be evolved for investigating complaints. It is, therefore, suggested that the Lokpal or Lokayukta should adopt a simpler method for dealing with simple and clear complaints, and thorough investigation should be undertaken only in the most difficult and genuine cases. Simple procedure, say for example, a telephonic inquiry, could often produce a change in decision and immediate redress to the complainant, whereas lengthy and thorough investigation in such simple type of cases would yield no positive results. To hear courteously, to answer wisely, to consider soberly, and to decide impartially should be adopted as guiding principles.

No penalty should be levied for lodging a complaint which is proved false one, or complainant has failed to prove his case. But the Ombudsman should be given power to advise the complainants to stop false and groundless attack on departments or officials. Overall procedure of Ombudsman should be open, fair, and impartial. Due weightage should be given to the principles of natural justice. Thus, camera meetings, or undue secrecy is not desirable in each case. However, in deserving cases secrecy rule can be applied.

Jurisdiction

- (i) *Failure of Public Duty*: We can draw some inspiration from the French Mediateur who is empowered to examine a complaint that a public authority has failed in its public duty entrusted to it as a mission of public service. Therefore, we should include a suitable provision to empower the Lokpal to investigate even those cases where the Government Department/Local Administration has failed to perform the public duties caused upon it by law. For the purpose of the Act "Mission of a public service" can be defined to mean that the authority — whether a Central Department, Local or any other authority, has shown lack of humanity, or has acted inequitably.
- (ii) *All Ministers*: including Prime Minister and Chief Ministers, should invariably be included in the Jurisdiction of Ombudsman. The argument that if he is allowed to question the merits of a decision by a Government Department, he would be taking over the responsibilities of a Minister, is quite a misconceived one.

The functions of the institution is not to supersede a 'Minister' or 'Department' but to provide an independent, and informed, assessment of the adequacy of the decision or lack of decision by the Departments. Various states in India have expressly excluded the Chief Minister from the province of Lokayukta. Orissa, Maharashtra, Rajasthan, Uttar Pradesh, Mysore, Bihar have excluded the Chief Minister. But Madhya Pradesh, Gujarat, Andhra Pradesh, and Tamil Nadu have decided to include the Chief Minister. It is essential to have uniform law on the subject. Various pretexts such as federalism, constitutionalism, ministerial responsibility and similar other grounds should not be allowed to come in the way. Only such officials and Ministers who are interested in shielding their misdeeds, omissions, improper actions, oppose the move of bringing themselves in the jurisdiction of Ombudsman. Countries included in the study have brought Ministers in the jurisdiction of Ombudsman. If one is sincerely and seriously thinking to check the maladministration then every person, whether he is a Prime Minister, Chief Minister, or any other Minister or top official, all are to be brought within the purview of Ombudsman.

(iii) *Discretionary Decisions*: The general provisions governing the Ombudsman, suggests that Ombudsman does not have the power to criticize the grounds or wisdom on which a discretionary decision is arrived at, but he may very well criticize illegal aspects of it. There may be cases in which the boundary line is blurred. In these circumstances, it is suggested that if the Ombudsman notes that a decision is groundless and tending towards some unfair consequences, then he should at once call the official's attention to the matter and if possible, present all those points which were not taken into account previously. A study of the Finnish Ombudsman reveals that in a number of cases he has commented on such discretionary decisions. In most of these, his action was held justified from the standpoint of both his propriety and prestige of his office. But it is further suggested that Ombudsman should not transcend the limits prescribed for his office. Transcending the limits may cause damages to its prestige.

(iv) *Alternative Remedy*: Arguments are often advanced that the Ombudsman should have no jurisdiction where the alternative remedy is available to aggrieved person either in Court of Law or administrative tribunal. In Sweden there is no such limitation. Omission of this condition has definitely yielded desired results. Working of the British Parliamentary Commissioner suggests that a provision leaving it to the discretion of the Ombudsman whether to take up the matter or not, where there is an alternative remedy, is not good enough because he has often used it as a ground for rejecting complaints. As per this study an alternative remedy should not be a bar to the jurisdiction of the Ombudsman. Moving to the Court or Tribunal may be expensive and dilatory. Furthermore, in India laws' delay and costs are notoriously prohibitive, and it is in fact to provide a remedy against such cases that the services of the Ombudsman are most needed. Therefore, it is suggested that sufficient powers should be given to the Ombudsman for making it a fully meaningful institution. He should handle one and all grievances as they are lodged to him and should not take any notice of formal remedies that may still be available to a complainant.

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(v) *Inspection*: In Sweden, Finland, and Denmark, the Ombudsman undertake inspections of Government offices within their jurisdiction. These inspections have proved to be of high value. Thus, field inspection is a necessary ingredient for the successful working of Ombudsman-like institution. It is, therefore, suggested that Lokpal should be given power to conduct spot study and he should undertake periodic inspection of the various departments which are in his jurisdiction. Visits to jail should be undertaken without fail.

(vi) *Power to act Suo Motu in certain cases*: There may be certain problems which may not worry an individual much, but they may concern general public. An individual is more worried when he himself is aggrieved. But he generally fails to bring a complaint before the Ombudsman if the matter is of public nature. In such cases Lokpal should have complete freedom to act even without receiving any complaint, if he has come to know about such problems through any other means. Except U.K., almost in all the countries included in this study have given this power to their Ombudsman. They have never misused this power. Therefore it is suggested that the Lokpal should have power to act on his own initiative.

No Intermediary for Complaints

In the U.K., no complaint can be entertained by the Parliamentary Commissioner unless it has been forwarded to him by a Member of Parliament. This type of provision, no doubt, has an advantage of ensuring that only those complaints are lodged for investigation by Parliamentary Commissioner in which *prime facie* a case has been made out. But the very object of lodging a complaint before an Ombudsman may be defeated by such provision if the complaint is against an M.P. himself. Even when a complaint is not directed against an M.P., the difficulty of an aggrieved person may well be visualized if it is essential for him to get an M.P. who will endorse his complaint. This condition, therefore, unnecessarily restricts the chances of getting relief from the Ombudsman.

Accessibility

A general study of the working of Lokayuktas in Maharashtra, Bihar, U.P., and Rajasthan, suggests that in their restricted frame of reference they are working well and also they have made some notable investigations. They have, however, proved disappointing in two respects. Firstly, they appear to be known about and used by only a small section of the population. Secondly, they are given a very limited role to play. Consequently, they have to decline to investigate a number of complaints where their independent assessment would be most valuable. To remove these drawbacks, the 'Institution' should be given wide publicity as to the location of his office and efforts should be made so that aggrieved may come before the Ombudsman without any fear or hesitation. He should be made accessible to all. He should not behave in a fashion or manner in which Ministers, or high officials behave. Present method of appointment, taking oath, ceremonial installation and

manner in which he works, suggests that he is something like a 'Minister for corruption' (Minister to check corruption). Irrespective of the status given to him, he should not forget that he is a "watch-dog" of every citizen first.

If no person is able to tell as to what for the Ombudsman is, or where his office is situated, then it will not prove a very useful institution. Therefore, provision should be made so that a citizen can approach him without any formality before, during, and after office hours by visiting his office or residence situated at a centrally and widely known place of the city. In genuine cases, the aggrieved should be able to complain to him even on phone.

Public Servants not to be Denied the Right to Complain

According to the Indian scheme visualized in the Lokpal Bill 1977 public servants were not entitled to lodge a complaint against public man whereas others (those who were not public servants) could do so. This provision would have deprived a very large section of society from seeking redress through Lokpal. This Bill ultimately lapsed. It may, therefore, be noted for the future that all citizens are equally competent to submit complaints regarding maladministration.

No Fiscal Burden for Lodging Complaints

The said Lokpal Bill of 1977 also made it a condition precedent for submitting a complaint that a sum of one thousand rupees be paid by way of deposit which would be forfeited if the complaint turned to be frivolous, or vexatious, or one which was not made in good faith. In a poor country like India, where innumerable persons live below the poverty line, such a condition can only lead to a denial of parliamentary redress to aggrieved persons a majority of whom will not be able to find money for the requisite deposit.

Assessment through Parliamentary Committee

Parliament should assess the working of the Ombudsman through Select Committee as in the U.K. The Committee on the one hand will provide a very effective 'back up' to his work, on the other hand regulate the functioning of the Ombudsman himself if he goes stray or do something which is not proper for him.

Accessibility to the Ombudsman's Findings

In Sweden journalists come in the office of the Ombudsman every morning to inspect the files of decisions by the Ombudsman, and of newly lodged complaints. This provision for open access for the press has certain advantages over the system of strictly limited access which applies elsewhere. In Denmark, heavy publicity is given to the findings of the Ombudsman. Practice of the present Lokayukta in our country is to release the report of their findings to the press only when they think it

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proper to do so. If the report is in favour of the persons placed at high level, then it is given much publicity: even all India Radio is used for the purpose. But if it is against some high officials or Ministers then it is kept as a closely guarded secret. It is, therefore, suggested that provisions should be made to make available Ombudsman's findings freely to the press. Television and Radio should also be made active partners of the Ombudsman's working. The matters which, however, deserve secrecy may be withheld from the access of the journalists or reporters.

Annual Reports

The Ombudsman could do a great deal to make his Annual Reports more readable and informative. It is suggested that the Annual Report should include a statistical summary of brief activities of his office during the year and improvement in administration which he suggested to the departments. A good statistical table showing the proportion of cases in which he has found complaint justified or secured a remedy etc. should complete the report. He might well also be empowered to report to Parliament in individual important cases rather than only his Annual Report. This procedure will keep the Parliament informed up-to-date on important cases. His Annual Reports should be made available to all the selected centres such as Lok Sabha, Vidhan Sabha, Research Institutes and other important libraries in the country. Besides this, it should be made a reasonably priced publication so that it can be purchased by anyone who wishes to have it.

Suggestion by the Ombudsman regarding Reforms

The Ombudsman should be empowered also to suggest changes and improvements in the official machinery designed to secure effective performance in safeguarding the rights of the individual citizens. These changes include recommendations for the modifications in the law as it relates to grievances and citizens' rights. The following two should be made as his key roles: (i) Helping citizens to secure redress against governmental errors, and (ii) helping to see that the other machinery performs effectively, expeditiously, and sensitively. This could be achieved if the Ombudsman is given the explicit power to make recommendation to the Government officers for granting damages to the citizens. As a measure against corruption, he should also be empowered to transmit to the police any evidence of criminal conduct when they are discovered during investigations. This would give support to the idea that the Ombudsman is the citizens' true guardian and real defender.

Secret of Success

(i) *Self-Persuasion*: One hidden secret of the success of the Ombudsman is that his real effectiveness lies in his formal powers than in his ability to make the proper authorities take appropriate corrective action. Thus, much of what he actually

accomplishes is done by persuasion and by calling attention to bureaucratic maladministration. Therefore, besides the powers given to him, he should seek some other way out in a problem which need to be solved. Any manner or procedure which he adopts for remedying maladministration is to be welcomed by all.

(ii) *Active Association of Citizens*: Other important aspect of it is that it is the duty of the citizen (specially of those who want to lodge a complaint with him or want to seek redress through him) to give him all the facts known to them and reasons for better results. Anonymous complaints may not yield desired results. Therefore, it is suggested that the citizens should also be informed or acquainted with the working of the Ombudsman in a convincing manner so that they may associate themselves as active partners of the Ombudsman himself.

(iii) *Mutual Faith*: The study of the Ombudsman in Denmark reveals that if cordial relation or mutual faith between Ombudsman on the one side and public and Government on the other side is maintained, the successful working of the Ombudsman can be assured. Therefore, all necessary efforts should be made for creating cordial relations between Ombudsman and all other concerning persons.

Linguistics

S. SAROJINI AMMA : GRAMMAR OF BHASHAKAUTALIYAM : A STUDY, University of Kerala, 1978, *Supervisor*: P. V. Velayudhan Pillai.

The Problem

BHASHAKAUTALIYAM is the earliest prose text available in Malayalam. It is a free commentary of the famous Arthashastra of Caanakya, alias Kautilya. Arthashastra is divided into fifteen *adhikaranas* with one hundred and eighty *Prakaranas*. It contains about six thousand Slokas or Suutras. But the Malayalam versions, namely *Bhashakautaliyam* contains only the first seven *adhikaranas*. We do not know whether the author of *Bhashakautaliyam* had rendered the remaining eight *adhikaranas* also into Malayalam. The present text contains occasional gaps but appears to be the earliest translation-cum-commentary for the *Arthashastra* in any of the regional languages in India.

Arthashastra might have been composed during the early centuries of the Christian era. But the Malayalam versions are assigned to the 12th Century A.D. by researchers. Though the authorship of the original is ascribed to Caanakya, a great theoretician and statesman of the age, we do not have any idea about the author of the Malayalam rendering.

Findings

A study of the language of *Bhashakautaliyam* reveals the fact that the language of Kerala during the beginning of the medieval centuries was struggling for emergence.

It was subject to pressure by the political language Tamil and the cultural language Sanskrit. It has a mixed phonetics, all the sanskrit and Tamil sounds finding a place in the texture of the language.

The text under study contains forty-two segmental phonemes of which five are vowels and thirty-seven are consonants.

There are three hundred and twenty-eight clusters in the text-two vowel clusters and three hundred and twenty-six consonant clusters. There are twenty long consonants (Homo-elemental clusters) also in this text. The vowel clusters and long vowels are capable of occurring in all the three positions. But consonant clusters occur only in the initial and medial positions. Long consonants occur medially only.

The phonological or the scaled 'nayas' enunciated by Prof. A.R. Raja Varma can be illustrated from this text.

Nasal assimilation

<i>tinkal</i>	-	<i>ti<u>ñ</u>al</i>	'month'
<i>pañci</i>	-	<i>pan<u>ñ</u>i</i>	'cotton'
<i>toonRi</i>	-	<i>toon<u>ñ</u>i</i>	'having felt'

Palatalization

<i>vaittu</i>	-	<i>vaic<u>cu</u></i>	'having placed'
<i>aRintu</i>	-	<i>aRinc<u>u</u>-aRin<u>ñu</u></i>	'having known'

Construction of vowels

<i>muRai</i>	-	<i>muRe</i>	-	<i>muRa</i>	'regular order'
<i>ñanaic<u>cu</u></i>	-	<i>nanac<u>cu</u></i>	-		'having caused to wet'

Dropping of personal terminations

<i>puujic<u>caan</u></i>	-	<i>puujic<u>cu</u></i>	'worshipped he'
<i>pooya<u>al</u></i>	-	<i>pooy</i>	'went away she'

Retention of archaic forms

<i>tinmaan</i>			'to eat'
<i>muu<u>tu</u>vaan</i>			'to cover'

Mutilation

raajaavinuteya - *raajaavinute* - *raajaavinRe* 'king of

It can however be seen that the operation of these rules is unpredictable. From

this it is clear that the hypothesis that the operation of these six *nayas* caused the emergence of Malayalam from Tamil is not sound.

The morphology of verbs was also in a liquid state. Verbs are divided into different categories.

Kaarita and *akaarita* : This is a system of grammatical conditioning of certain Malayalam roots with *-kk* as a stem marker. This form is traditionally called *kaarita*. Causative forms also take the marker *-kk* with them. This *-kk* and the *kaarita* marker *-kk* are different. *Kaarita* forms are simple verbal forms with *-kk* which do not have the meaning of causation. *Akaarita* stems, in their simple forms do not have *-kk*. *kaarita*. Eg. *milkkuka* - to stand; *akaarita*. Eg. *kuRayuka* - to decrease

Transitives and causatives : Verbs have been classified into transitives, intransitives, and causatives by traditional grammarians of Malayalam. There are semantic factors also controlling the presence or absence of contrast between Transitive and intransitive. Causatives only have formal significance. By definition transitives are verbs expressing an action which does not end with or is not confined to the agent. They are capable of governing a direct object. Causatives are verbs expressing or indicating that the subject causes an agent to perform the action.

Hence here verbs are broadly put under two categories - Non-causatives and causatives are divided into transitives and intransitives.

Transitives and intransitives are conjugated in the same manner to express causation.

eg:	<i>kolluka</i>	-	<i>Kollikkuka</i>	-	to cause to kill (tr:)
	<i>ootuka</i>	-	<i>ootikkuka</i>	-	to cause to run (intr:)

But a transitive derived from an intransitive can also express causation. All causatives are transitives. But all transitives are not causatives.

Markers of causation: simple verbs are made causatives by adding *-kk* *-tu*, *-tu*, *-RR*, *-i*, and *-ppi* to the stem.

Eg:	<i>mutiyuka</i>	-	<i>muti +kk+uka</i>	-	to cause to end
	<i>viiluka</i>	-	<i>viil +tt+uka</i>	-	to cause to fall
	<i>kaaluka</i>	-	<i>kaa+it+uka</i>	-	to cause to see
	<i>eeRuka</i>	-	<i>ee+rr+uka</i>	-	to cause to ascend
	<i>ootuka</i>	-	<i>oot+i+kkuka</i>	-	to cause to run
	<i>kotukkukaa</i>	-	<i>kotu+ppi+kkuka</i>	-	to cause to give

-pp occurs only in *kaarita* verbs. *kaarita* has *-pp* instead of *-kk* in this text. When it is made causative *-pp* comes in. Eg: *kuṭi +ppi+pp+itu* - *kuṭippippitu* - will cause to drink Generally in future tense with *-itu* two *-ppi*'s occur.

Negatives

Verbal stems in the text are affirmative by nature. They are made negative by the

addition of suffixes. The negative suffixes occur in the text are -aa, -aat, -aatt, -aamal, -aann and ϕ .

There are four moods in the text. They are Imperative, Injunctive, or obligatory, optative, and potential moods.

The tenses are present, past, and future. The present tense markers are; *n*, *unn*, *in^R*, *kin^R*, *ir*, *aanin^R* and ϕ . Past tense markers are. *t*, *c*, *c₂* > *c₂* *nn* *nn*, *n̄n* *nt* *n^R*, *y*, *n*, and *i*.

Future tense markers are, *unn*, *aan*, *v*, *p*, *pp* and ϕ .

The practice of adding gender number suffixes to verb stem is a common characteristic of Dravidian languages. The pronominal fragments are called personal terminations. Terminations for the first person are '-een', *an*, and 'oom'. Those for the second person are '-iir', and '-aay' and for the third person '-an', 'al', 'aar', 'ar', 'va'/'vu', 'itu' or its variants. The use of 'vu' suffixes in plural meaning is peculiar to the language of early period.

eg: *connavu* — those which said

The '-itu' ending forms of the verb contributes to the conjecture that all finite verbal forms of the day did not have personal terminations. Any way it seems to be a compensatory addition to verbs in the absence of personal terminations. Among the finite verbal forms in the text 78 per cent are — 'itu' ending. Verbs with personal terminations are only 5 per cent and verbs without personal terminations are 13 per cent. Appellative finite verbs occurring in the text are 4 per cent. This shows that the personal terminations of verbs gradually disappeared from the language.

Many nominal forms in the text end in 'a' and 'ai' and very rarely in 'e'.
eg: 'aana' - 'aane' - 'aanai' - elephant.

Modern /a/ forms are the product of gradual change of the ancient /ai/ forms, the /e/ forms being the intermediate link which might have hastened the transition.

There are three genders masculine, feminine, and neuter differentiated by adding suffixes to the nominal stems.

Masculine gender markers are '-aan', and '-an'. eg: *aṭiyaan* - slave man
makan - son

The masculine marker '-an' is added to words denoting irrational objects also.
eg: *kaṭan* - debt; *krauñcan* - Indian love bird. Feminine gender markers are - 'l', '-al', '-aal' and '-tti'

- aval* - she (distant)
- aṭiyaaly* - slave woman
- kiḷatti* - old woman

The use of suffixes 'x' is optional in the neuter. As regards in neuter variants like *kaṭam* and *kaṭan* occur

As in the other Dravidian languages Malayalam has only two numbers, singular and plural. The stem itself or the stem with the gender suffix is used as singular, whereas the plural is formed by adding the pluralizing particles to the stem. Plural forms can be divided into non-gender plural, gender plural, and double plural. Non-gender plural markers are -a, -r, -ar, -aar, or and -kal.

eg: <i>ava</i>	-	they (distant)	<i>aar</i>	-	who
<i>iruvār</i>	-	two persons	<i>atīyaar</i>	-	slaves.
<i>uṭayoor</i>	-	they who possess.	<i>aanakal</i>	-	elephants

Gender plurals markers are '-maar' and '-kal'

eg: <i>amaatyanmaar</i>	-	ministers
<i>pennukal</i>	-	women

Exceptions

<i>vidvaannaḷ</i>	-	scholars
<i>kayyanaar</i>	-	a servant.

Double plural markers are '-al' and '-kal'

eg: <i>ṇammaḷ</i>	-	we	<i>paṇḍitarkaḷ</i>	-	scholars
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The case system found in the text appears to be very complicated. The division into nine cases here, is made by taking into account the case markers only. The Nominative has no marker. The objective case markers are ϕ -e, -ee, -a and -ai. Except ϕ all are free variants.

'ai' is a retention of Tamil form in Malayalam. This marker has the highest percentage of occurrence in the text.

The sociative case markers are '-uṭan', '-oṭu' and '-ooṭu'.

The markers of Dative case are '-u', '-nu', '-in^Ru', '-kku', '-akku', '-ikku', '-ekku', '-eekky', '-ykku', and '-ṇku'. Sometimes '-u' takes '-kku' also as an addition.

eg: *amaatyan* = *u+kku* - *amaatyanukku* - minister for

The instrumental case marker is '-aal'. The ablative case markers are '-ite', '-itai', '-itte', '-itta', '-attai', and '-n^Ru'. The meaning of this case is ablative of motion and is expressed by '-iṇinnu' in modern Malayalam. All these forms are variants of a single form.

The Possessive case markers are '-uṭa', '-ute', '-uṭee', '-uṭai', '-itai', '-ita', 'ite' and 'Re'. All these forms are variants of a single form. '-Re' occurs only two times in the text.

The Locative case markers are '-attu', '-_ ', 'kal', '-vaay', '-a', '-e', '-ee', '-ai' '-uṭe', '-eel' and 'il'.

The vocative case marker is '-ee'.

Pronouns are distinct from nouns for they have contrast of persons, namely first, second, and third. But they decline for gender, number and case as any other nouns.

The first person declines in numbers and cases. Singular nominatives are 'ṇaan' and 'naan'. Singular oblique base is 'en'. To this case markers are added. The dative form of the first personal pronoun in present day Malayalam is 'enikku'. But this text contains only 'enakku' forms. There are two forms of plural, inclusive and exclusive. Plural inclusive oblique form is 'nam' and plural exclusive oblique forms are 'enṇal' and 'enkaḷ'.

The second person also declines in numbers and cases. The inflexional base of the second person singular is 'nin' and plural forms are 'ninnal' and 'ninkal'.

Unlike the first and second person pronouns the third person declines not only in number and cases but in gender also. This has no oblique form. Singular base in masculine form is 'avan' and feminine form is 'avaḷ'. Neuter singular form is 'atu'. Non-gender plural forms are 'avar', 'avaral', 'avarkaḷ', 'ava', and 'avaRRa'. Case markers are added to these forms.

There are two classes of demonstrative pronouns; distant and proximate. Their pronominal bases are 'a' and 'i'. They represent the third person also. Proximate demonstrative masculine singular is 'ivan' and feminine singular is 'ival'. Proximate demonstrative non-gender singular form is 'itu'. Its non-gender plural forms are 'ivar', 'ivaral', 'ivarkaḷ', 'iva', and 'ivaRRa'. To these forms all case markers are added.

Reflexive pronoun form is 'taan'. It declines only in numbers and cases. Its oblique form is 'tan'. The plural nominative form is 'tannaḷ' or 'tankaḷ'. The oblique form of the plural reflexive pronoun is 'tam'. These forms take all case markers.

Interrogative pronoun bases are 'aa' and 'ee'. Interrogative neuter singular forms are 'eetu', 'eṇtu' and 'aaru'. Plural forms are 'evu' and 'evaral'.

Distributive pronoun is formed by repeating the reflexive pronoun. The forms are 'tattaam' and 'tattantamakku'.

Some Sanskrit nouns in the text take Sanskrit suffixes. But no Dravidian noun takes a Sanskrit suffix as in the *Maṇipravala* which is a parallel literary movement in the 12th Century Malayalam.

The *Sandhi* changes are representation of the peculiarities of that period.

eg: a + aana	-	avaana	-	that elephant.
kaaranam	+	um-kaaranamua	-	reason and
amaatyar	+	kaal- amaatyakaḷ	-	ministers
mul	+	tati- muttati	-	a kind of weapon

Some Tamil *Sandhi* changes also occur in the text.

irimpu	+	ulakka	-	irippulakka	-	iron pistol
aantu	+	tukai	-	aattattukai	-	annual income
ekiRu	+	paatu	-	ekiRRupaatu	-	mark of teeth
paampin	+	toli	-	paampinRoli	-	skin of snake

Though very rare some Sanskrit *Sandhi* changes also occur.

eg: visayee	-	country in	maargeṇa	-	way in
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The study on elitics throws light on the evolution of the indeclinables in the language. There are a good number of obsolete words and expressions in the text. Some of them have completely dropped out of use.

J.J. TRIVEDI: COMPARATIVE STUDIES IN THE GRAMMATICAL SYSTEMS OF HINDI AND GUJARATI LANGUAGES., University of Gujarat, 1976, Supervisor P C. Sharma.

The Problem

The present research work is an advanced analytical study in comparative synchronic linguistics of the modern Indo-Aryan family of languages with special reference to the grammatical systems of Hindi and Gujarati languages. The thesis itself is the first comparative grammar of the two language-systems. An attempt has been made to define the similarities as well as dissimilarities between the two grammatical systems, and to draw upon such conclusions as may be applied to solve the methodological problems being faced at present by the Gujarati speaking students as well as teachers in learning as well as teaching the grammatical system of Hindi as a second language.

The application of linguistic data with regard to the similarities as well as dissimilarities between the two grammatical systems, to the Hindi language teaching as well as learning can be of the utmost importance to: (i) the Hindi teachers in exploring the new teaching techniques on the modern lines of applied linguistics, and to (ii) the Gujarati speaking students, in solving the difficulties and the grammatical problems with regard to the Hindi-Gender, Case, Voice, tense formation, and syntax, which they have to experience in learning Hindi as a second language.

Methodology

The synchronic comparison of the two grammatical systems has been based upon the new analytical techniques of the modern linguistics such as the technique of morphemic analysis preponderated by Hocket as well as Harrice and the syntactical techniques of the T.G. (American) Grammar popularized by Gleason and others of the American school.

The linguistic data pertaining to the two grammatical categories have been collected from both these languages and distributed on comparative analytical lines in the charts. The conclusions have been drawn upon from the similarities as well as dissimilarities between the two grammatical systems, highlighting the linguistic features which are indicators of the nature and behaviour of the two language systems.

Findings

Hindi and Gujarati, as the Modern Indo-Aryan Languages.

Despite the fact that both the languages are the undoubted descendants of Sanskrit, the phonological, morphological, and syntactical systems in which they are exhibited

to have been structurized, differ widely from that of Sanskrit and from each other as well. The differences with regard to the behaviour of their grammatical systems at the surface structures can be well explained at the deep structures in context with their individual linguistic nature, which they have evolved into themselves in the course of time from the common heritage of Sanskrit.

Comparative Morphology

It is due to the syllabic ending mute [a] that the Noun Morphemes ending in consonants are rare in Gujarati. 'N-Ms' of masculine gender ending in[aa] are inherent to the linguistic system of Hindi. Unlike Hindi, 'N-Ms' of Masculine and Neuter genders ending respectively in [0] and [un] are inherent features of the Gujarati language system.

The Dravidian family of language has its serious linguistic impact upon Gujarati in terms of the honoric pronouns 'Emne'/'Temne' which lack in standard Hindi but very much in vogue in the eastern dialects of Hindi. As regards the chapter of gender, it is evident that the Gujarati gender has its natural basis more preserved than controlled by its grammatical basis. The Gujarati 'N-Ms' are more inclined to be genderwise transformed than the Hindi ones. The semi-*Tatsama* verbs which lack in Hindi are copiously in vogue in Gujarati.

The participles play an important role in formation of Hindi tense, whereas in Gujarati the tense formation mostly stands for the *Tianta* and in part, for participles. This is why in Gujarati, unlike Hindi, the verb is not transformed genderwise. The state of case-ending in Gujarati has still remained some what synthetical, unlike in Hindi, where the state of case-ending is all analytical. In Gujarati the natural and the passive voices are not distinct forms as in Hindi but are complicated. The synthetical verbal forms of passive future are the special feature of Gujarati grammatical system.

Comparative syntax:

The complex form of sentence is copiously prevalent in both the systems today due to the direct impact of English syntax upon them. The indirect narration speech of English is today more rapidly impressing the direct one of Hindi than Gujarati.

The Gujarati noun or adjective phrase in the simple sentence featuring a special linguistic behaviour of its own is a complex structure in which the grammatical essentials of both, the phrase and the clause, are intrinsically mixed with each other. But in Hindi simple sentence the clause is never structurized.

K.V. KESAVA SARMA: THE TREATMENT OF PRIMARY SUFFIXES IN BHOJA'S, SARASWATI-KANTHABHARANA, University of Kerala, 1980, *Supervisor* : S. Venkita Subramania.

The Problem

The *Saraswati-Kaṇṭhābharana* of the versatile writer king Bhoja of Dhara of the 11th century is a progressive treatise on Sanskrit grammar. Although following mainly the Pāṇinian system it liberally adopts whatever the other systems like Candra, Kātantra, and Jainendra have to offer and also incorporates all the additions and modifications to the grammatical processes and vocabulary suggested by grammarians subsequent to Pāṇini as well as the commentators of Pāṇinian system such as Kātyāyana, Patāñjali, Jayāditya, and Vāmana.

Methodology

The thesis presents a critical text of the portion on which it is based. For this all the important manuscripts were carefully collated, the genealogy of the manuscripts traced and the text fixed as accurately as possible. Besides variant readings, notes on readings have been added stating with regard to the more important cases the reason for adopting particular readings.

Findings

Like Aṣṭadhyāyī, this work has eight adhyāyas and it has not omitted the *Vaidika Prakaraṇa*. It is in the form of sūtras, over 6,000 on the whole. The grammar of classical Sanskrit was his main theme, though particulars of Vedic grammar are also spoken of. A more commendable aspect of Bhoja's work is the justification of such usages as would require grammatical sanction, especially when they are rejected as incorrect by the Bhāṣyakara and Vārtikākara, but which figure in the writings of great poets in Sanskrit. In such instances he follows the Kātantra system of grammar which had already advanced in this direction.

Some of the sūtras in the *Saraswatī kaṇṭhābharaṇa*, *Kātantra Kyākarāṇa* *Cāndravyākaraṇa* and in the *Jainendravyākaraṇa* have the same reading. In several instances Bhoja combines the sūtras, combines the sūtras and *Vārtikas*, and also combines the *Vārtikas*. He sometimes also splits the sūtras. In some sūtras based on Pāṇini he introduces slight changes. All the sūtras in the *Saraswatī-Kaṇṭhābharana* are very brief, suggestive and free from any kind of repetition. Sometimes additional meanings are also given by him. The *Vārtikas* of the Pāṇinian system are also treated as sūtras by Bhoja. Difference in reading is met with in some *Vārtikas* also. Auxiliaries like *ganās* are also given in an extended form where the other grammari-

ans simply give a few examples under the respective sutras of Pāṇini where a *gaṇa* also, each *gaṇa* being given either fully in the sutra itself or in the form of a few sutras following the one which corresponds to the sutras of Pāṇini mentioning a *gaṇa*. The *gaṇas pacādi nandyaḍi, grahādi* etc. shows this clearly.

The aim of Bhoja in writing the *Sarasvatī Kāthābhāraṇa* is to provide a treatise on Sanskrit grammar which will be clear and complete by bringing together the sutras, *Vartikas*, *Paribhasas*, *Ganas* and *unadi* sutras and making them as complete as possible. Thus one who wishes to master Sanskrit grammar can do so through *Sarasvatīkāthābhāraṇa* more easily than through other grammatical texts. This aim is achieved in abundant measure. It is complete not only in the sense that it deals with all the sutras of Pāṇini, the *Vārtikās* of Katyayana in contrast with the earlier works of a like nature but also in the sense that it freely draws up on sources outside the Pāṇinian school and incorporates them and adds several words necessary to make its compass up-to-date and wide enough. In the *kr̥t* and *Unādi* sections of *Sarasvatī Kāthābhāraṇa* we can see these additions of words, meanings and the extensions and restrictions of the scope of the sūtras. Thus it is a fact that Bhoja treated all the topics such as *Kṛt unādi* etc., more elaborately than the other grammarians; what is more important is that Bhoja noted all the forms from the time of *Astadhyaye* to his time. Several words which are added by Bhoja in the *Kṛt* and *Unādi* sections are found attested in *R̥gveda*, *Atharvaveda*, *Purāṇas*, *Mahābhārata* and *Ramayana* and other works prior to Bhoja. The words which he adds in the *Kṛt* and *Unadi* sections are also sometimes found in his *Campūs rāmāyāna*. We can also see several words which are added by Bhoja in the *Kṛt* and *Unādi* which are not found attested in any work.

In addition to the *Asīdhyāye* of Pāṇini he utilized several non-Pāṇinian systems. Among the non-Pāṇinian systems utilized in the work, the most important are *Cāndra Vyākaraṇa* and *Kātantra Vyākaraṇa* and between them the pride of place is given to the first. But the name of these systems or the authors of these systems are not mentioned in the work.

A close study of the *Sarasvatī Kāthābhāraṇa* reveals that Bhoja wrote his work after fully mastering the works like *Astadhyaye*, *Vartikas*, *Bhasya*, *Kasikavṛ̥thi*, *Candra Vyākaraṇa*, *Kātantra Vyākaraṇa*, *Jainendra Vyākaraṇa* and closely, observing current usages and he also closely observes the *R̥gveda*, *Atharvaveda*, the *Mahābhārata*, *Ramayāna* etc. Thus Bhoja enunciated his rules incorporating what was unnoticed by his predecessors such as Pātaṇjali etc and the popular usages seen in the earlier works. Thus the main sources of his grammar are the works till his time and living speech of himself and contemporaries.

Bhoja's *Sarasvatī Kāthābhāraṇa* is an intellectual treasure to those who are desirous of acquiring erudition. By the process of additions of words, addition of new *Unādi* suffixes, addition of meanings and addition of prepositions Bhoja has succeeded in extending the scope of Pāṇini's rules so as to cover many later features of classical Sanskrit. Unlike the other grammatical systems, one noteworthy thing to be pointed out about the *Sarasvatī Kāthābhāraṇa* of Bhoja is that it is the first exhaustive work giving the *Vārtikas*, the *Paribhasas*, the *Unādi Sūtras*, the *phit* sutras and the words in the *ganapatha* in the body of the work. Thus Bhoja has presented his *Sarasvatī kāthābhāraṇa* in a highly systematic manner.

The observations of Bhoja are based on actual usage in his time. His sūtras are meant to serve another purpose, namely to make the grammar of Pāṇini up-to-date and, as far as possible complete and perfect. In doing so he has taken into account the forms which had actually evolved after Pāṇini and used by grammarians of other systems such as Cāndra and Katantra. Bhoja found that in some cases Pāṇini's rule did not work properly, because Pāṇini had not taken these cases into account, either through oversight or unfamiliarity due to the usage in question belonging to another region or having originated only after Pāṇini. Thus the aim of Bhoja in writing the *Sarasvatī Kanthābharaṇa* is to modify and supplement the rules of Pāṇini wherever they were or had become partially or totally inapplicable.

Bhoja's method is to rearrange the grammatical material with the object of bringing together all the rules that deal with the same phonetic or grammatical operations as well as the same part of speech.

In the *Kṛt* and *Unādi* sections we can see in a few cases he desires the words differently from Panini and other grammarians. A large number of sūtras of Bhoja in the *Kṛt* and *Unādi* sections agree word for word with Pāṇini's and in the cases where they differ the object has been to say in shorter and fewer words what was already intended by Pāṇini. His ingenuity is mainly confined to economizing the wording of the sutras. Thus, as a measure of economy, Bhoja invariably substitutes shorter and easier words for Pāṇini's longer and difficult ones.

Such comprehensive, thorough, systematic, and authoritative work has not been subjected to any detailed study so far. An attempt is made here to initiate such a study by starting with *Kṛt* or primary suffixes are dealt with therein. Since *Unādi* also forms a part of the primary suffixes they are also brought within the scope of the present study.

Management

MEERA LAL: PERSONNEL PROBLEMS IN NATIONALIZED BANKS : A CASE STUDY OF THE STATE BANK OF INDIA, University of Patna, 1984, *Supervisor*: H.K. Sahay.

The Problem

IN RECENT years, industrial relations or production relations in an economy in general and in the public sector in particular has assumed great importance from the point of view of growth, stability, and social justice.

Personnel relations in nationalized banks and particularly in the State Bank of India have aroused mixed feelings. Since banking is a public utility service its efficiency depends upon adequacy of the personnel manning the whole organization. However, personnel in the banking industry have been faced with numerous problems and many capable bankers and economists have come to the conclusion that they can successfully improve the tone, calibre, and quality of banking services considerably and fulfil new functions of the banking policy if only the staff problems are solved.

The evils of private ownership under capitalism led to the belief that nationalization or social ownership would solve all problems. We have before us the British experience from which we can draw lessons.

Findings

In the banking industry, State Bank of India has a pioneering role to play with its vast experience and a chequered course in history. When the Imperial Bank

culminated into the State Bank of India, with the objective of 'growth with profitability' it plunged into its expansive programme not only quantitatively but qualitatively also. The decentralized pyramid structure has given the functionaries ample scope and power to deal with the personnel problems effectively. Staff and personnel functions are regarded as specialized areas and separate departments like Human Resource Development 'manage' people. However, there appears to be lack of a comprehensive, precise, and coherent personnel policy in the State Bank of India.

Although general observations have confirmed that staff relations in the banking industry have always been on the whole much better than those of other industries, the average white-collared bank employees as well as management feel that industrial relations have not been found to be altogether harmonious or *cordial* particularly in localized areas. Most of the problems have arisen due to leadership tussle between Unions and Branch authorities, intra-Union rivalries, *ad hoc* decisions imposed by the management and similar other problems leading to industrial conflict. The main issue of contention generally leading to strikes and disputes has been with regard to wages, wage policy, and wage structure in the banking industry. Other issues like recruitment, transfer, promotion, training, and welfare measures have also from time to time led to discontent and frustrations. Further the realization of the 'goal of Industrial Democracy' still remains a distant possibility.

Although high expectations from nationalization have more or less remained the same; nationalization has not been successful in solving personnel problems, establishing a new social order and a new industrial relations culture. It appears that nationalization is no 'panacea for all evils' and only an all round concerted effort, informed action, sense of responsibility and a changed attitude and outlook on the parts of management, trade union workers, and government, in a changed social milieu, can bring about a radical transformation, promote harmonious industrial relations, remove the glaring anomalies, and solve personnel problems.

P. VYASULU: A STUDY OF FACTORS RELATED TO SUPERVISORY PERFORMANCE IN SOME MANUFACTURING UNITS, I.I.T., DELHI, 1984, *Supervisor*: Purnima Mathur.

The Problem

This study falls into the area of research on leadership. It was an attempt at understanding factors that are related to supervisory performance in some manufacturing industries. The study used Fiedler's contingency model of leadership effectiveness as its basic model, with some modifications, by including variables

from outside the model. The objective of the study was to validate Fiedler's model in Indian work settings and extend the model, if possible.

Methodology

The study examined thirteen individual and situational variables related to supervisory performance. They were as follows:

1. Individual variables—age, education, experience, training, LPC score.
2. Situational variables—group atmosphere score, formal position power, score, and five job dimensions—skill and variety, task identity, task significance, autonomy, and feedback.

Supervisory Effectiveness Variable.

A questionnaire covering these was used for data collection and it was supplemented with personal interviews with the sample. The sample consisted of 231 supervisory personnel from seven manufacturing industries.

For the purpose of this study, the term "supervisor" refers to persons performing leadership functions on the shop floor, whose responsibilities include technical, operational, and personnel functions. Thus, it essentially covers those personnel who work in line positions in tool-room, assembly, finishing, and other such departments. The data collected were analysed using various multivariate statistical methods and specific hypotheses on the relationship between variables were tested.

Results of the analysis are shown in Tables 3, 4, 17 and 18.

Findings

Of the thirteen various individual, background and leadership, and situational variables examined, only four variables namely, group atmosphere, task identity, feedback, and ORI self showed some relationship with supervisory performance.

It can be concluded that the results did not give sufficient evidence to support the main postulates of the contingency model of Fiedler. However, the interactional theorizing in leadership studies gets support. A further point that is brought out by the results of factor analysis and regression analysis is that the independent variables studied interact to yield factors that can predict leader effectiveness. This implies that leadership research can benefit from cognitive-interactive approaches. Such an approach is not inconsistent with Scott's (1977) comment that 'leadership is best viewed as a behaviour that can be shaped and maintained by its consequences'. However, such approaches face the same constraints as researches using cognitive and phenomenological approaches, where it is not possible to '... specify definitely which variable is antecedent and which is consequent'. (Wylie, 1961)

Interactional approaches provide valuable research designs where the purpose of research is '... to test a hypothesis of the causal relationship between variables and to gain familiarity with a phenomenon or to achieve new insights into it, often in order to formulate more precise research problems or to develop hypotheses. (Sellitz, 1976). But, Mitschel cited by Stats (1980) cautions that it must be borne in mind that in researches using interactional approaches, ... interaction may be a statistical artefact.

Thus, several questions come up about the choice of appropriate methodologies and approaches to study leadership. It is suggested that larger and longitudinal studies be conducted before these results are used for any generalization.

The study also reports an attempt made by this researcher in developing a projective test for supervisory behaviour and attitudes.

TABLE 3
CORRELATION MATRIX OF 13 VARIABLES (INDIVIDUAL AND SITUATIONAL), FOR REGRESSION (N=172)

LPC	ORIS	ORIT	ORII	GAS	PP	SPAN	JDS 1	JDS 2	JDS 3	JDS 4	JDS 5	EFF
LPC	1.0											
ORIS	-0.045	-0*412	0.161	0*305	-0.006	-0**183	0.039	0.024	-0.040	0.107	0.082	0.004
ORIT	1.0	-0**222	-0**663	-0.063	-0.134	-0.013	-0.125	-0.046	-0.137	-0.024	-0*155	0*160
ORII		1.0	-0**571	0.024	0.032	0.099	0.069	-0.087	-0.009	0.068	0.017	-0.039
GAS			1.0	0.029	0.086	-0.019	0.043	0*105	0.119	-0.018	-0.109	-0*104
PP				1.0	0.051	0.035	0.087	0.023	-0*145	-0.040	-0.033	-0*165
SPAN					1.0	0.147	0*159	0*150	0**248	0.051	-0.016	0.071
JDS 1						1.0	0.048	0.062	0**075	-0.076	0.009	0.065
JDS 2							1.0	0**235	0**312	0**185	0.045	-0.075
JDS 3								1.0	0.259	0.070	-0.023	-0.001
JDS 4									1.0	0.190	0**208	0.069
JDS 5										1.0	0**241	0.033
JDS 6											1.0	-0.109
												1.0

Levels of Significance 0.05-* .138
0.01-** .181

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TABLE 4
BEST EQUATION WITH TWELVE VARIABLES IN THE SET

Var.Name	Regression Coeff.	Standard Error	T Stat	Part Corr.	Multiple Correlation	E.S.S.
EDUC	0.0876097	0.319199E - 1	2.74	-0.21	0.951	0.655641E - 2
EXP	0.0106206	0.677118 - 2	1.57	-0.12	0.953	0.635788E - 2
TRG	0.0470072	0.406711E - 1	1.16	0.09	0.953	0.631388E - 2
IPC	0.0024377	0.334526E - 2	0.73	0.06	0.953	0.628238E - 2
GAS	0.0419382	0.459604E - 1	0.91	-0.07	0.953	0.629418E - 2
SPS	0.0589084	0.316052E - 1	1.86	0.15	0.952	0.639756E - 2
DPS	0.0215573	0.444555E - 2	4.85	-0.36	0.946	0.718184E - 2
AV	0.0312954	0.609392E - 1	0.51	0.04	0.953	0.627192E - 2
II	0.0572135	0.592600E - 1	0.97	0.08	0.953	0.629808E - 2
FS	0.1374154	0.6685722 - 1	2.06	0.16	0.952	0.642692E - 2
AU	0.3990200	0.875980E - 1	4.56	0.34	0.947	0.707362E - 2
EB	0.1976338	0.704885E - 1	2.80	0.22	0.951	0.656925 E - 2

E.S.S.

0.626160E - 2

Residual Error

0.625580E - 0

Multiple Correlation

0.953

TABLE 17
FACTOR ANALYSIS OF SEVEN SITUATIONAL VARIABLES SHOWING FACTOR ANALYSIS

	Variable 1	Variable 2	Variable 3	Variable 4	Variable 5	Variable 6	Variable 7
Factor 1	-0.00628065 Per cent Variation	0.38135382 =24.48788361.	0.64013985	0.52378930 Cumulative per cent Variation	0.71595218	0.49189039 = 24.48788361.	0.36056028
Factor 2	-0.52195926 Per cent Variation	-0.39862442 =16.86596883.	- 0.2752828	0.325292907 Cumulative per cent Variation	0.08659402	0.43600570 = 41.35385244.	0.60800082
Factor 3*	0.75807739 Per cent Variation	0.04969926 =14.86779161.	0.1415140	-0.43528274 Cumulative per cent Variation	-0.11475333	0.06046322 = 56.22164405.	0.48710642
Factor 4	-0.19983190 Per cent Variation	0.77617913 =13.12032708.	-0.33203306	-0.32038034 Cumulative per cent Variation	0.17081964	-0.15394533 = 69.34197113.	0.10131710

TABLE 18

SUMMARIZED RESULTS OF CONTINGENCY ANALYSIS OF VARIABLES STUDIED

Variable	χ^2	C	Degrees of Freedom	Significant @	Remarks
Age	4.94	0.166	6	0.5-0.7	Rejected
Education	15.187	0.284	14	0.3-0.5	Not rejected
Experience	13.49	0.268	6	0.5	Not rejected
Training	4.90	30.165	6	0.5-0.7	Rejected
LPC	4.708	0.162	4	0.3-0.5	Rejected
Position Power	14.282	0.276	22	0.9	Rejected
Group atmosphere	5.748	0.178	4	0.2-0.3	Rejected
Skill and Variety	7.74	0.206	8	0.5	Rejected
Task Identity	10.305	0.237	8	0.2-0.3	Rejected
Task Significance	9.085	0.223	8	0.3-0.5	Rejected
Autonomy	7.412	0.202	8	0.5-0.7	Rejected
Feedback	10.45	0.238	8	0.2-0.3	Rejected

N. M. MUNSHI: PERSONNEL MANAGEMENT IN THE UNITS OF SMALL SCALE INDUSTRIES OF SAURASHTRA REGION, University of Saurashtra, 1984, *Supervisor*: N.M. Khandelwal.

The Problem

The work explores the significant characteristics of the structures as well as functions of the personnel management in the units of SSI situated in the region of Saurashtra, (Gujarat State). It is intended to cover almost all the facets and aspects which have been observed in the process of field-work and data collection and to draw conclusions that would help in the development of these industries.

The sphere of the research study is confined to (a) the small scale industries (SSI) only and also (b) the geographical area of the old Saurashtra State.

The entire study has been, therefore, divided in the three conspectuses : (1) Definitional Aspect (2) Functional Aspect (3) Resultant Aspect

Definitional Aspect

1. Industrialization is the sign of new civilization. The thesis deals with the particular type of industry, namely SSI, so it is necessary to define SSI. However, the government definition regarding SSI has been adopted.

2. Manpower is the most important and unparalleled factor of production; organizational goals can only be achieved through manpower. Output is an outcome of the manpower utilization. Capable and able work force can increase the output and incapable and incompetent work force makes much of the wastage of the other factors of production. This can be depicted schematically as:

$$\text{OUTPUT} = \text{MP} (C + R + M + N)$$

MP = Manpower

C = Capital

R = Raw materials

M = Machineries

N = Any factor that contributes to the output.

3. There is not a single organization which has no problems, but there are many organizations which have no organized system in order to solve their problems. An attempt has been made in the course of the field work to find out the problems faced by the units of SSI. Total 150 units were visited during the field-work and thirteen problem areas were traced out for the purpose of investigation.

There is a wide appraisal gap with regard to the personnel and general management techniques obtaining in the units of SSI. Research has lacked in these vital areas to ascertain what our small units are doing in the field of personnel, how they manage their human resources, what are the crucial problems they face in handling manpower, and what are the bottlenecks they face in maintaining good human relations with their employees. One can hardly find a single comprehensive volume dealing specifically with the problems faced by the management of small units.

The present thesis examines various theories in personnel management and attempts to provide empirical evidence. A comparative study of theory and practice is made and gap between the two is evaluated.

Methodology

The universe of the project is confined to about 200 units of SSI of which 150 units co-operated in providing data. For the reasons of convenience and time it was decided to confine the study to a few major industrial groups, namely Food, Textile, Chemical, Glass-clay based, Ferrous, Non-ferrous metal based, machinery, its spare parts manufacturing, and other miscellaneous industries located in the districts of Saurashtra region. It was planned to visit the units of three districts consisting of developed Rajkot district, developing Jamnagar district, and backward district Bhavnagar.

The survey method of using questionnaire and personnel interviews have been used for collecting primary data and information. Most of the data (99 per cent) were obtained through personal interviews, through questionnaire, and observation. Data for the study were obtained through the secondary data sources such as publications of local management associations etc.

The sample was selected on the basis of personal sampling. Random sampling could not be employed due to heterogeneous nature of the universe and also on account of uncertainties regarding willingness of the unit owners to provide data for the purpose of this study. The survey was conducted from October 1977 to 1979.

The study examines the following major parameters: (1) Manpower planning; (2) Manpower selection process; (3) Manpower training and development; (4) Wage and salary administration; (5) Industrial relations; (6) Communications; and, (7) Employee motivation and welfare.

Findings

Manpower Planning

In the units of the SSI, manpower planning function is being performed in a very informal way. The organizational structure of the units of SSI consists of only two

levels of management: (A) The top management, includes owners and chief executive or manager. (B) The first line management, includes foreman supervisors.

It was found that the people employed in both the levels were very few, so acute problems like promotions, demotions transfers etc. do not arise in small units. So most of the units have not paid any attention towards the manpower planning of white collar people.

With regards to the blue-collar manpower, the planning function in the units is being performed in an informal way. Unit owners were completely unaware of the planning function.

Recruitment and Selection Process

The manpower recruitment and selection procedures in most of the units tend to be informal. The main objective of the units is to provide employment opportunities to local people, so it was pointed out that excessively formal procedures of selection were not only felt unnecessary but also unrealistic and irrelevant.

The major sources of recruitment frequently used by the units were as follows:

1 Relative - Friends - Employee's recommendations	78.66%
2 At the the Gate-or-Casual Callers	30%
3 Newspaper advertisements and sign boards	16%

The minor sources of recruitment used by the units were as follows :

1 Schools-Colleges-institutions	8.66%
2 Employment exchange	8%
3 Contractors	4.66%

In eight private and two public limited companies and 55 partnership firms all the rank and file applicants are screened by a selection committee. In remaining units working partners-or-proprietors-, screen, take the interviews, and select the candidates. In most of the units, labourers were appointed on the basis of recommendations, personal interviews, and informal trade tests.

Training and Development

Our entrepreneurs are highly skilled labourers or qualified technical men or well experienced businessmen. They manage the unit as owners, so their approach towards managerial functions become an owner's approach rather than a manager's approach.

It was realized in the course of the field-work that the units have not given much thought to training and development of personnel. Perhaps, this was the obvious reason why units did not get sufficient skilled labourers. The arguments, for not installing well planned training and development programmes as advocated by unit owners are :

- 1 The very small size of the units in which duties slotted to the other senior employees are so specific and functional that even internal transfers are not possible.
- 2 The non-complicated network and process of production of the entire units do not require any specific training.
- 3 The fundamental drawbacks of the small units are (a) limited sources of finance (b) measured steps in production (c) limited time at their disposal.

It was found during the survey that only three out of 150 selected units, offered opportunities to the employee for career planning. It was significant to note that these units did not grant promotions purely on seniority basis.

The authority is centralized and none has visualized the importance of delegation of responsibilities and authorities.

Wage and Salary Administration

The units have employed 1.44 per cent of the total people at their top management level, while 5.24 per cent were foremen or supervisors and 6.26 per cent were clerks and other office staff. The determinant factors for salary structure are found as follows (1) Growing salary rates in the community; (2) Ability or capacity of the unit to pay.

The points considered for the determination of wage rates were as follows: (1) Minimum and maximum labourers required to complete the job. (2) Processes and difficulties involved in completing the job. (3) Skills, technical know-how, knowledge, and experience required for the job. (4) Quality and quantity ratios of the product. (5) Growing wage rates in the community. (6) Ability and capacity of the unit to pay. (7) Time required to complete the job. (8) Availability of the skilled and unskilled labourers. (9) More than average interest of the unit involved in production and importance of opinionated skilled labourers.

About 66.06 per cent units have used time wage method, 20.66 per cent units have implemented piece wage method, 11.33 per cent units have framed the wage structure through the combination of time wage and piece wage methods, 11.33 per cent have also implemented the incentive schemes.

Wage Rates

Through this survey, the principal thing which comes out is 86 per cent units pay wage at minimum level in the range of Rs. 100+225. The wage structure prevailing in the units does not match the need based minimum. If we allow for the erosion of real purchasing power of money, in the last decade, the figure of need based minimum wage would be around Rs. 300 to 325, i.e. at least Rs. 12 to 13 per day.

It was argued that this lower rate was paid to unskilled and semi-skilled labourers according to their efficiency and technical knowledge. It was found

during the survey that out of the total labourers employed in 150 selected units, about 69.45 per cent were semi-skilled and unskil.

Units of SSI of Saurashtra region do not exploit skilled and experienced labourers, as they are not perhaps able to exploit due to non-availability of skilled labourers. About 51 per cent units were paying to their labourers the need based minimum and 49 per cent units were paying even more than need based minimum wage. About 77 per cent units were paying in the range of 250 to 450 per month. There were about 30.54 per cent skilled labourers working in the selected units.

Analytical calculations proved that 60 per cent units of Glass-clay based industry were paying maximum wage rates in the range of Rs. 250 to 350, and 40 per cent units were paying in the range of Rs. 650 to 750.

Ferrous metal based, machinery and its spare parts manufacturing small scale industry is one of the major industries of Saurashtra region and is very satisfying to note that the units of this industry group pay comparatively very good maximum wage rates to some of the labourers.

The general phenomenon was that unskilled and semiskilled labourers were paid at lower rates: lower than even the need based minimum wage rates. As a matter of fact, for most of the other units of SSI not covered in this survey, it may well fall below, perhaps much below, either at the subsistence or need based minimum. It is just that this purposive sample of the units of SSI gives a rather flattering picture of compensation in the SSI of Saurashtra region, established particularly in Rajkot, Bhavnagar, and Jamnagar districts.

Cost of Living Plans

The workers were getting increments in their wages each year, but rate of increments were not framed on certain policy but were given as per whims of the owner of the unit. Apart from this, the employee compensation includes bonus, gratuity, P.F., and E.S.I. benefits. E.S.I. Scheme was existing in about 54 per cent units.

Wash-up Time and Lunch Break

Most of the units owners expressed that they were providing enough time to labourers for lunch, so it was not felt necessary to allow wash-up time before lunch. However, some employers stated that though the labourers were expected to work till last minute of the scheduled lunch break, many workers leave their work posts a few minutes before lunch break.

Pay in Advance

About 73.33 per cent units were permitting their workers to draw a certain portion of pay in advance.

Special Reward

Instead of soliciting the theory of job satisfaction, the question should be raised to the employee, whether they are fully sincere to their job. So job sincerity should be motivated. One should not only try to satisfy the employees through the means of motivation plans, but sincerity towards the job should be provoked and motivated through the means of motivation plans.

Communications

It was found during the field-work that a simple organizational structure, namely Line-organization exists in most of the units. The channel of communication and the line of authority were the same, so, in the units, line of authority also have become the line of communication. An oral communication generally takes place in small units and communication is direct between the owner, supervisor, and workers. The communication channel in most of the units was top downward channel. About 13.33 per cent units invite suggestions from employees, but only two units have placed the suggestions inviting box.

Motivation and Employee Welfare

It was felt during the field-work that unit owners have provided some welfare amenities to the labourers only to satisfy their some basic needs and to motivate them to perform their job effectively. Most of the units were not providing any welfare amenities for various reasons as discussed below :

- 1 Such benefits increase the total cost of production which is very difficult to cover in sales price. Units have yet to develop the financial capacity.
- 2 It was felt impracticable to provide benefits and services to few employees.
- 3 Due to skeleton staff small units of SSI were free from statutory provisions.
- 4 It was the opinion of some employees that withdrawal of welfare benefits in bad days of the unit, become weapon in the hands of employees which ultimately ruins the relations, so it was better not to think about it as long as there was no breach of any statutory provisions.

Units have tried to provide certain possible welfare benefits and services but they were very much suspicious towards the results derived from such awarded welfare benefits and services.

Some of the common welfare measures and services provided to the employees in the units of SSI were found as follows :

No.	Particulars	Units.	Percentage
1.	Financial aids	10	6.66%
2.	Recreation and other benefits		
	(a) Picnic-entertainments	7	4.66%

	(b) Refreshments	3	2.00%
3.	Safety and Health Provisions:		
	(a) Medical facilities	50	4.66%
	(b) First-aids	138	92.00%
	(c) Uniforms	5	3.00%
4.	Housing facilities	7	4.66%
5.	Other facilities, Gifts, Grains etc.	7	4.66%

It was found that all above mentioned units have provided rooms to the labourers and not the housing facilities in a real sense. Not a single unit was charging rent for the rooms and supply of water, electricity, and sanitary facilities were also provided free of charge.

Units provide such benefits to the employees when they deem it fit and find necessary. Units did not want to establish any right of the employees for any benefits and facilities.

Industrial Relations

Owners of the units opine that the labourers are one of the factors of production, so the human aspect of labour is not the concern of the employers.

As a matter of fact employees and employers do not have any good or bad relations. A striking feature of employee-employer relations in the units of SSI is based on the complete informality and mutual give and take atmosphere.

Even at industry level there is no separate labour union representing employees of SSI Units. Mostly, disputes were settled through bilateral and voluntary negotiations and rarely the adjudication machinery had to be resorted to: about 55 per cent units told that they kept very good social relations with their employees. On the other hand some units attempt to ignore employees' grievances hoping that if they do not pay attention to them, they will solve themselves.

The employer-employee relations seem to be on an excellent footing, particularly, when it is realized that most of the units have harmonious and strikeless industrial relations. Very few units, only 6.66 per cent have faced strikes. The reasons placed by the labourers in various units for strikes were varied.

JANUARY-DECEMBER 1984

P.N. KRISHNA NAMBOOTHY: MOTIVATION AND EXPECTATION REALIZATION OF EMPLOYEES IN THE SELECTED INDUSTRIES IN THE INDUSTRIAL BELT OF ALWAYE, University of Cochin, 1982, *Supervisor*: P.N. Narayanan Nair.

The Problem

This study is to understand and estimate worker behaviour, worker climate, and to measure the rate of mutual dependence and influence of motivation and expectation-realization of the employees in selected five industries in the industrial belt of Alwaye.

A highly energized goal oriented activity is often described as motivation. Satisfaction of the need which energizes the behaviour has been a subject of detailed study by the behavioural scientists. Satisfaction may be described as a condition of expectation-realization. Therefore, it may be considered that the subjective gap between expectation and realization (E R Gap) is an index of lack of satisfaction, as they are mutually influence and interactive, i.e. wider the E R Gap, greater the dissatisfaction; narrower the gap greater the satisfaction. Therefore, expectation realization and motivation can be related by means of degree of satisfaction/dissatisfaction.

The above concept of motivation brings out that motivation is related to satisfaction, a by-product of E R Gap. The assumption made in this study for empirical verification is that wider the gap, lesser will be motivation, and, narrower the gap greater will be motivation. The objectives of this study are to

1. Measure the rate of motivation of the employees;
2. Measure the rate of expectation realization of the employees, and,
3. Test that how far motivation and expectation realization are mutually influence and interdependent.

Hypothesis

The major premises of this study are:

1. Degree of satisfaction/dissatisfaction is the product of the subjective gap between the need expected and need realized.
2. Satisfaction and expectation realization are conterminus.
3. Motivation is influenced by satisfaction/dissatisfaction.
4. Motivation and expectation realization are also conterminus.
5. Motivation and satisfaction are conterminus.
6. A highly energized and goal directed behaviour is motivation.
7. Motivation is a description of the behaviour and not an explanation.

8. There are two variables that affect motivation: (i) Wider the B R Gap greater the dissatisfaction and lesser the motivation. (ii) Narrower the gap, greater will be satisfaction and motivation will be high.

Methodology

The study is based on observation, participation and data analysis of the responses to the questionnaires. For correlation simple mathematical tools are employed and consequently there is little scope for elaborate explanation or discussion.

The mathematical tools and techniques are: (i) Linear Equation analysis and (ii) Exponential Equation analysis. Dimensional analysis is employed to analyse the various dimensionless groups formed with all influencing parameters. The validity of the above method is verified by regression analysis with the help of 'MICRO' computer and 'BASIC' language. Viable equations, both linear and exponential, have been developed to measure the industrial worker climate, satisfaction and mutual dependability, and influence of motivation, expectation-realization, and satisfaction of the employees.

The basic unit of enquiry is the employee in the five selected industries in the industrial belt of Alwaye, covering fertilizer, metal, rubber, chemical, and acid industries. The total population is 7,337 and the sample population is 1,080. The sample population is 14.719912 per cent of the population.

The sources of data for this study are:

1. Replies to the questionnaire, and
2. Observation, interview, participation, and experience.

Summarization of the data was done by means of a five point scale so as to measure empirically the worker satisfaction, climate, motivation, expectation-realization and their mutual dependability. Based on the result of summarized data the industries and employees are classified into not five defined and different zones.

Zone	Climate	Condition
1. Sickener	Unhealthy	Not at all satisfactory
2. Preventer	Unconductive	Not-satisfactory
3. Routine	Non-Motivative	Average satisfaction
4. Motivator	Healthy	Satisfactory
5. Innovator	Energizing	Most satisfactory

The entire analysis is based on the following hypothetical conditions

1. Externally influencing parameters are equal to the internally influencing parameters. i.e. Values of a to d and g to I are equal to Values of e and f and k and I.

2. Motivation points are equal to ER points, i.e. values of a to f are equal to values of g to k.

Method for mathematical correlations

For mathematical analysis the method adopted by means of both linear and exponential equations in order to assess the motivation climate, satisfaction and the mutual dependability of the employees. Further, an analysis is also attempted to assess these factors in respect to the expectation-realization gap. For a better result, averages of the results of linear and exponential equation are taken into consideration for final correlations.

For correlations, working conditions, monetary benefits, non-monetary benefits, and rest and recreation are considered as the internally influencing parameters whereas labour relations and trade union activities are considered as externally influencing factors, in regard to motivation and expectation-realization of employees. For this, six dimensionless groups are formed in the following pattern

Motivation	Parameters	ER	Dimensionless Groups
'a'	Working condition	'g'	(a/g)
'b'	Monetary emoluments	'h'	(b/h)
'c'	Non-monetary benefits	'i'	(c/i)
'd'	Rest and Recreation	'j'	(d/j)
'e'	Labour relations	'k'	(e/k)
'f'	Trade Union activities	'l'	(f/l)

This correlation is effected by means of simple mathematical tools.

1. Linear equation analysis

$$a/g = b/h + c/i = d/j = e/k + f/l$$

OR

$$(a/g + b/h + c/i + d/j) \text{ Minus } (e/k + f/l) = 0$$

Any slight change in the result of above equation indicates a corresponding change in climate, rate of satisfaction and mutual influence and dependability of motivation and expectation-realization. The variations are interpreted as follows:

Result	Zone	% of satisfaction
0-1.0		100 - 80
1.01-2.0	Innovator	79 - 62
2.01-3.0	Motivator	61 - 50
3.01-4.0	Routine	49 - 25
4.01-5.0	Preventer	24 - 00
	Sickener	

To measure the mutual dependability of motivation and expectation-realization, the correlation is: (Total motivation points) Minus (Total ER Points) The variations are analysed in the following format

Value of Correlations	% of Mutual dependability
0.0 - 1	100 - 80
1.01 - 2	79 - 60
2.01 - 3	59 - 40
3.01 - 4	39 - 20
4.01 - 5	19 - 00

Exponential equation analysis

It is believed that analysis of dimensionless groups yields better results if it is done by means of exponential equations. To find out the exponent various exponents are tested and the average of them is found to be the most suitable and so it is selected. The exponent is (Ideal motivation minus actual motivation) divided by (Ideal ER minus actual ER)

The format of analysis is the same as in case of the linear equation analysis. The ideal worker climate and satisfaction are analysed by means of the following equation

$$(A/G)^a + (B/H)^r + (C/T)^s + (D/J)^t \text{ minus } (E/K)^u + (F/L)^v$$

Secondly, the mutual dependability of motivation and expectation realization is evaluated as per:

$$(A/G)^q + (B/H)^r + (C/T)^s + (D/J)^t \text{ minus } (E/K)^u + (F/L)^v$$

The variations, if any, are interpreted in accordance with the format specified for the linear equation analysis. The analysis is attempted by industry-wise, sector-wise and finally in the area.

Findings

The final result of the correlations in regard of public sector employees are:

1. Climate Non-motivative
2. Condition Average satisfaction
3. Zone Routine Zone

The rate of mutual dependability and influence between motivation and expectation realization of employees in Industry No 1 is 95.67073 per cent and in

Industry No. II is 98.33935 per cent,

Secondly, the industries in public sector are taken and correlated as one unit.
The result of the correlation is:

- | | |
|--------------|---|
| 1. Climate | Non motivative |
| 2. Condition | Average satisfaction (58.4337 per cent) |
| 3. Zone | Routine Zone |

Rate of mutual dependability and influence of motivation and expectation realization is 95.45766 per cent.

Thirdly, mathematical correlation is attempted as in chapter V. The results of the mathematical correlation in regard to private sector employees are:-

	Industry No. I
Climate	- Non-Motivative
Condition	- Average satisfactory (57.1198 per cent)
Zone	- Routine
Rate of mutual influence	95.646 per cent

	Industry No. II
Climate	- Non-Motivative
Condition	- Average Satisfactory (57.91072 per cent)
Zone	- Routine
Rate of influence	- 97.811695 per cent

	Industry No. III
Climate	- Non-Motivative
Condition	- Average satisfactory (59.71455 per cent)
Zone	- Routine
Rate of influence	- 99.48437 per cent

Finally a comparison is attempted to measure the worker climate, rate of satisfaction, and mutual influence of the employees in the private sector employees. The results are:

Climate	- Non-Motivative
Condition	- Average satisfaction (59. 18288 per cent)
Zone	- Routine
Rate of influence	- 95.902945 per cent

Correlations

After the generalization of the worker climate, satisfaction, and mutual influence and dependability of motivation and expectation realization of the employees in the

industries in the industrial belt of Alwaye the results are: The worker climate is at an average level (58.8799 per cent) in which the climate is Non-Motivative. Hence they are in the Routine Zone.

As for the rate of mutual influence and dependability of motivation and expectation realization of the employees in the industrial belt of Alwaye, the result is that they are mutually influencive and dependable by 95.902945 per cent.

Verification of the results

The method adopted for the verification of the results of correlation are: (1) analysis of variance for randomized complete block design; (2) two-way classification with one observation per cell; (3) the analysis is attempted by 'MICRO' computer using the ware language 'BASIC'.

There are four sets A, B, C, and D. The blocks of set A and B are formed by taking each industry as a unit of analysis and hence there will be six parameters and five blocks. Blocks of sets are formed by taking each parameter in all industries as the unit of analysis and hence there will be five parameters and six blocks.

Set A = Average values of motivation points

Set B = Average Values of E R points

Set C = Average values of Motivation points

Set D = Average values of E R points.

In all these sets the finding is that, since F_i is less than $F_{0.05}$ (5.20) or (4.20) it implies that the hypothesis that t_s are zero and b_s are zero is rejected, i.e, the hypothesis that the treatment effects are independent. So it is concluded that the treatment effects are interdependent and they are mutually influencive and interactive. The rate of confidence is nearly 95 per cent.

Political Science

BRAHAM SWAROOP AGARWAL : A STUDY OF THE KOREAN NATIONAL MOVEMENT, University of Lucknow, 1984, *Supervisor:* Rajendra Avasthi.

The Problem

THIS WORK is an attempt to present an account of the rise and development of the Korean national movement in a historical perspective. It highlights the emergence of the forces of social change and enlightenment in Korea in the nineteenth century and consequent awakening and resurgence of the Korean people. The study depicts the inherent strength and weakness of the Korean society and its capacity to withstand the colonial onslaught on its national existence in the wake of internal upheavals and external interventions in the context of contemporary international framework in the Far East in general, and unique triangular relations between Korea, China and Japan, in particular. Tracing out the motivations and courses of the various phases of the Korean national upsurge and analysing the causes of their successes and failures, the study aims at assessing the Korean national struggle in terms of its contribution towards the transformation of the country into a progressive and modern national entity, and structural consolidation of the Korean society.

Methodology

The information was collected through a search of the contemporary literature such as manuscripts, compilations, newspapers, magazines, gazettes, pamphlets, etc., so that the actual socio-political environment of the time could be traced out and the

real motives, ethos, and passions of the people involved and affected could be ascertained. Some relevant data were collected to show the extent of socio-economic dislocation and change. The main approach is historical and analytical.

Findings

Beginning with the growth of the Korean national identity and a brief description of the structural characteristics of the early Korean society, the study covers almost all major stages of the Korean national movement up to the end of the Second World War. The main contention is that the history of the Korean nationalism goes back as far as the fourth century B.C., and it was not a result of the Western impact. By the end of the seventh century A.D., i.e. prior to the emergence of the nation-State in Europe, Korea was a unified kingdom enriched with brilliant cultural achievements that formed the basis of its national identity. Long and uninterrupted spells of native dynastic rules over the whole of the country strengthened this identity while continuous external attacks promoted patriotism and a defensive type of nationalism among the Korean people. However, the early Korean nationalism was not accompanied by the political awakening of the masses as there was little chance for them to participate in the decision-making process in a highly stratified structure of the Korean society and government. Therefore, early Korean nationalism rested more upon the cultural, ethnic, linguistic, and historical bonds rather than the socio-political consciousness of the people. This is what the writer of this dissertation means by the 'traditional Korean nationalism.'

During the reign of Yi dynasty (1392-1910), socio-economic and political stratification became more rigid resulting in excessive oppression of the common people, particularly farmers, at the hands of the ruling class of Korea—known as 'yangban.' This caused a split in the Korean society, and the exasperated masses began to question the legitimacy of the unjust socio-economic order and inordinate administration; their revolt against the autocracy of the yangban regime gave rise to the revolutionary form of Korean nationalism that was motivated by the desire for social change and uplift of the downtrodden masses. Peasants' revolts of 1812 and 1862, and the Tonghak Rebellion of 1894 not only demolished the traditional structure of the Korean society, but also generated social consciousness among the people.

In the meantime, knowledge of the modern European discoveries and sciences and the western ideas and institutions, that reached Korea through China and Japan, affected an intellectual fervent in the Korean society giving rise to the reformist thought (such as, Sirhak) and movement in Korea. The Modernization Movement of 1884, and the Reform and Enlightenment Movement of the Independence Club of 1896-98 were imbued with the spirit of national progress and resurgence. These movements contributed to the intellectual and political awakening of the Korean masses, and transformed the traditional Korean nationalism into

a modern and enlightened nationalism. At the same time, Western encroachments on Korea had begun during the later half of the nineteenth century. The ruling elite of Korea strove to save the kingdom from outside invasions by taking shelter of a nominal suzerainty of the 'Celestial Empire' of China on the one hand, and by isolating the country from the rest of the world, on the other. Also, the Korean rulers were trying desperately to preserve the traditional socio-political set-up in order to maintain their privileges and extract loyalty and obedience from the common people. Disregarding the nationalist voices of reform and innovation, they refused to adapt to the changing times and circumstances though a few of them introduced some administrative and educational reforms. But, the latent forces of change from within had already started their campaign against the obsolete system, and were opposed to the policy of dependence on China. Thus, by the end of the nineteenth century, Korea was at cross-roads, and was unprepared to meet the challenge of outside imperialism.

The Japanese colonialism in Korea shifted the focus of the Korean nationalism from the internal emancipation of the people to the external freedom of the country, and turned the Korean national movement into an anti-Japanese and anti-colonial struggle that reached its apex in the Independence Movement of 1919. In the beginning, common sufferings of the Korean people under the yoke of a foreign rule brought them together resulting in socio-political cohesion and the unity of purpose; but the failure of the March 1 Movement of 1919 and the resultant frustration created a schism in the ranks of the Korean nationalists. Some of them, who were disenchanted with the ideals of peaceful transformation and growth, took the path of a violent national struggle; others, who still adhered to a peaceful and evolutionary approach, continued their effort to build up the internal strength of the country.

The study has led to the conclusion that though the external impacts provided occasional impetus and ideological orientation to the Korean national movement, its primary motivations came from the internal urges of the Korean society; and that though, from ideological and organizational points of view, the Korean national movement was, to some extent, weak; yet, it was guided by a constant spirit of self-preservation and a quest for socio-economic-cum-political emancipation, and contributed to the rapid transformation of the Korean society; it broke down the social stratification and paved the way for building a modernized and progressive nation. Korean nationalism was in no way merely an anti-Japanese sentiment or xenophobia, rather, the Korean people showed a readiness to accept the finer aspects of the Japanese policy (e.g. education) in Korea, and sought the help of other nations in the task of strengthening and modernizing the country. The Korean national movement was a movement organized by the common people themselves, particularly by the middle and high school students and farmers, as a stable and effective national leadership could not be evolved. The main strength of this movement came from the Korean people's determination to break off their shackles both from within and from without, and to save their national heritage from extinction.

VIR BHARAT TALWAR: *PREMASHRAM AUR AWADH KA KISAN ANDOLAN*, Jawaharlal Nehru University, 1984, *Supervisor*: Namwar Singh.

The Problem

'*Premashram*' is a famous novel written by Munshi Premchand. It was claimed in the year of Premchand Centenary, 1980, that '*Premashram*' was influenced by its contemporary peasant uprising in Awadh. It is said that the novel bears a visible impact of that uprising on its plot. Even before this, many scholars had related '*Premashram*' with that uprising. But nobody had substantiated it with facts and evidence.

This question explored in this work is: was this novel really indebted to that movement. If so, in which way was it?

This novel on peasant question was written in 1918-20. Premchand translated it from the original Urdu to Hindi in 1921 and published it in 1922. The years, 1918-22, were a period of great turmoil in Indian history. This period witnessed not only a high tide of peasant movements and worker strikes, but also a higher stage of national movement under the leadership of Gandhiji. Premchand was not only a writer of peasantry, but also was a staunch soldier of anti-imperialist national struggle.

What was the relationship between this novel and the era? In what way does a period influence a work of art? What type of relationship exists between social reality and a work of art? Does a great writer, like Premchand, only reflect social reality or reconstructs it?

Methodology

The methodology laid down by Lucien Goldman, the famous French sociologist of literature was followed in this work. While making use of Goldman's methodology, the scholar also remained conscious of its limitations. For instance, the critical outlook and imagination of the writer, to which, Goldman does not give its due importance, were in his view relevant to a study.

For the study of peasant movement of Awadh, the scholar has gone through Baba Ramchandra's Papers in J.N.M.M.L.'s (New Delhi) manuscript section, besides published and unpublished research material on the subject. To study the social-economic and cultural conditions of that age, use of the newspapers, magazines and journals of that period has been made. Also, the original Urdu draft of '*Premashram*' available in Allahabad Museum was studied.

Findings

There was no link between '*Premashram*' and the peasant movement of Awadh. Though the Kisan sabhas were formed in Awadh in 1918-19, the actual peasant struggle occurred from the beginning of 1921. The Urdu draft of the novel had been completed ten months before the uprising took place. While Premchand was translating it from Urdu to Hindi, non-cooperation movement was also going on in full vigour besides the peasant uprising. Whereas Premchand did not add or subtract anything on account of peasant uprising, he made some quick additions in the Hindi version at a number of places to propagate the ideals of non-cooperation movement.

Premchand served the non-cooperation movement of Congress and propagated its programmes through his writings. At the same time, he was of the view that the national movement should not be limited to the politics of educated urban middle class, but broadened into a mass movement by inclusion of programmes concerning the interests of peasantry. To connect the national movement with the interests of the peasantry, he gave a call for the abolition of Zamindari system. However, the Congress was neither in favour of Zamindari abolition nor to support anti-feudal peasant struggle at that time. In spite of this stand of Congress, Premchand depicted peasantry in his writing struggling against the Zamindars. In one of his short stories written in 1921, he showed the inevitability of the end of Zamindari system.

The study shows that '*Premashram*' became very popular in its time as the first political novel in Hindi. The novel became the subject of lengthy discussions and numerous reviews. The novel was considered helpful to the non-cooperation movement. In fact a number of patriots in jail read this novel with fervour. Pt. Jawaharlal Nehru, in Lucknow jail, read it within six months of its publication.

Lastly, it emerges that a writer of Premchand's standing does not reflect but re-constructs the social reality of his time. As a creation of art is influenced by its time, so also is its reading and evaluation.

RAMESH CHAND GUPTA : THE UNITED STATES ARMS SALES POLICY IN WEST ASIA AND THE GULF, 1969-1977, Jawaharlal Nehru University, 1984, *Supervisor* : M.S.Venkataramani.

The Problem

The investigations have been limited to the three countries namely Iran, Saudi Arabia, and Israel.

Methodology

The study is based on the primary and secondary sources material available in

leading libraries of India and the United States. The study is largely based on interviews with officials in the State and Defence Departments, members of Congress and scholars engaged in similar areas.

The questionnaires were prepared the observations recorded and the data were collected on the Foreign Military Sales (FMS). The approach to the problem was analytical and not historical.

Findings

After the end of the World War II, in the global strategic calculations of policy-makers in the United States, the oil rich West Asian and the Gulf region has rated a priority next only to Western Europe and Japan. Till the developments in Iran culminating in the overthrow of the Shah, Iran, Saudi Arabia, and Israel were the key countries in the region in Washington's perception. Domestic factors made it almost imperative for successive Administrations to extend assistance to Israel and serve as *de facto* guarantor of Israel's survival against the threats posed by its much more numerous Arab adversaries. Total identification with Israel, it was recognized in Washington, would involve a dangerous alienation from the U.S. of even 'moderate' Arab nations and increase opportunities for Moscow to expand its influence in that critical region. That prospect was deemed totally unacceptable by American foreign policy planners. Nevertheless, it was recognized that some means must be found by which Washington could, while helping Israel, retain cooperative relationship with the ruling regimes of the other two key countries of the region, namely Iran and Saudi Arabia.

An important instrument in Washington's armoury was promotion of this objective through arms supply. Initially, it took the form of a grant programme. Subsequently as the so-called oil crisis brought huge wealth to Iran and Saudi Arabia, a growing arms sales programme to the two countries was seen to promote not only the U.S. strategic objectives but also the American economy. The repercussions of large scale arms supplies to Israel were also sought to be mitigated by large sales of sophisticated military equipment to Iran and Saudi Arabia to ensure a cooperative attitude on the part of the ruling regimes of the two countries. In this respect during the period under review, the U.S. was able to have a significant level of influence on the three countries despite their differing and opposed objectives.

The procedure for the arms sales to the Third World countries was highly complicated. The complications were due to various decision-making channels. Bureaucratic wrangles, leaks to the Press, and Congressional and public opposition to a proposed arms transfer could delay its implementation. The pace of implementation would ultimately depend upon the urgency and importance which the Administration, especially the President and his top advisers, attached to it. Where the President is determined to take an urgent action to meet an emergency situation, procedural delays could be very sharply reduced and action implemented, provided, of course, Congressional authorization existed.

The region as a whole was of great importance for the U.S. and its allies. It was important because of strategic, politico-military, and economic considerations. During the seventies the Suez Canal continued to be an important waterway for international commerce; important air routes also passed through the area. In economic terms, the region was rich in deposits of oil. In the situation of Cold War with the Soviet Union, the U.S. was interested in seeking military bases and setting up military installations in the countries of West Asia so as to be in close proximity of the Soviet Union.

The region became all the more important to the U.S. after the British decision in 1968 to withdraw from "East of Suez". The Nixon Administration looked upon Iran and Saudi Arabia as its two pillars in the West Asian region. The American thinking was that Iran and Saudi Arabia should provide security to the Gulf states and that Washington should provide them necessary military hardware so as to enable them to perform that task. Iran was willing to share the burden of providing security to the Gulf states. Tehran also wanted to play an important role in the Indian Ocean. Both Nixon and Kissinger regarded the Shah as a 'dependable' friend.

The Shah repeatedly pointed out that Iran faced a threat from the Soviet Union in the north. The U.S. did not question the threat perception of the Shah partly because he was willing to pay for most of his military purchases and partly because the authorities in Washington sought to utilize a militarily strong Iran to promote their political interests in the region.

America provided advanced military systems to Saudi Arabia for almost the same reasons. The latter had been a traditional American ally in the region. Both the countries needed each other. Saudi Arabia needed American military technology and the United States wanted uninterrupted oil supply both for its own consumption and that of its allies in Western Europe and Japan. There was no 'classic' threat to the security of Saudi Arabia from an external power during the 'seventies. The monarch there wanted to protect his own position. Here again the U.S. did not question publicly the Saudis' threat perception and provided sophisticated military aircraft like the F-15. Saudi Arabia acquired such aircraft more for "prestige" reasons.

After the October 1973 War, when the Saudis' dollar holdings increased substantially and its influence in the Arab World increased considerably, it started competing with Iran for the leadership of the Gulf. The U.S. desired that along with Iran, Saudi Arabia too should fill the power vacuum created in the Gulf after the British withdrawal in 1971.

The third country that received advanced military systems from the United States was Israel. Although Israel was not a member of the defence pacts signed by the U.S. with the countries of the region, it continued to receive most-favoured-nation treatment in the matter of arms supply. Israel was strategically important for the United States. The American Jewish community was an ardent supporter of the Israeli cause. The influence of the Jewish lobby in Congress was significant.

While supplying arms to Israel and Saudi Arabia, America did not allow those countries to influence its course of action towards each other. The Jewish lobby and

the Oil lobby in Washington could exercise limited influence over the Administration's course of action in dealing with the Jewish state and the Arab states. Arms lobby played a vital role in pushing arms sales especially to the Gulf states.

While the arms sales policy pursued by the Nixon-Ford administrations strengthened Iran, Saudi Arabia, and Israel militarily, it promoted the U.S. domestic interests and especially economic interests. The foreign military sales (FMS) policy pursued by the Nixon and Ford administrations was, by and large, successful, and they had no inclination to curb these sales, although, they professed to the contrary in various fora. But later on (1976), Jimmy Carter talked of curbing the FMS especially to the Third World countries. After assuming the presidency, he announced a new conventional arms transfer policy popularly known as PD-13. Carter's new policy went the old way. An idealist Carter became the realist Chief Executive as his term progressed. Iran, Saudi Arabia, and Israel remained the largest recipients of American arms. The Carter Administration could not ignore the politico-military, economic, and strategic importance of the Gulf states. Carter realized the strength of the military-industrial complex in America as his term progressed. By the end of his term his new policy, especially in the region under study, had failed.

The Reagan Administration lost no time in 1980 in repudiating Carter's hesitations and in firmly asserting that arms sales would remain a very important ingredient in its national security policy.

HUKUMCHAND PARASHAR : OFFICE OF THE GOVERNOR AND POLITICS OF UPHEAVAL, University of Bhopal, 1981, *Supervisor*: R.P.Pandey.

The Problem

The main aim behind the study has been to explain whether or not the Indian Constitution permits the Governor to exercise his discretion under Article 163 of the Constitution or whether the founding fathers of the Constitution wanted to make the office merely a gubernatorial post in the State polity. The objective is to study the five main aspects, namely:

1. What did the Constituent Assembly intend the office of the Governor to be;
2. What did it emerge to be between 1950 and 1967;
3. What has the office become since 1967;
4. Whether the role played by the Governors after 1967, was Constitutional or extra-Constitutional, and

5. What were the causes that completely changed the office.

Methodology

As far as the approach to the subject is concerned, it is straightaway political with a legal bent. It seems somewhat desirable and sound because even the legal luminaries confess that 'Legal quibbles' in the absence of "practical-politics" are not sufficient to understand a particular political system. The methodology adopted for study is historical, analytical, observational, and critical.

The Governor's office is one of the important offices in our Constitution and the constitutional status of the Governors will have to be maintained. They should be given 'definite functions' and they have to fulfill 'some very definite purposes'.

No doubt the office of the Governor is not the corner-stone of our self-governing democratic apparatus, but it has a unique importance in the working of our Union-State relations and in filling political vacuum as and when the constitutional machinery in the State breaks down. Even in the normal working of responsible government, the Governor has extensive influence

Findings

Of all the names given to the holders of the highest executive offices in British times, only one survives after Independence; and that is of the 'Governor'.

The Governor, however, remains in his old form; and the rules and orders relating to him and all instructions regarding his residence, travelling, guards-of-honour and ceremonials, are such that it would appear that the Governor enjoys the same position that he did before.

During the period of Jawaharlal Nehru's Prime Ministership a view that the office of the Governor was merely gubernatorial has been widely prevalent in our set-up. State Governors visualized as 'rubber stamps' and; magnificent ciphers' were not expected to play any substantial or effective role in State administration other than that of a nominal Constitutional head. Therefore, the demands in certain quarters of public life were that the office of the Governor being superfluous and expensive be abolished from the Indian parliamentary system.

With the death of Nehru in 1964 and the political upheaval after the Fourth General Elections of 1967, the political climate of the country suddenly shifted from one party rule to multi-party system. The political upheaval of 1967 marked a watershed in determining the position of the Governor in the body politics of the country.

After the upheaval, in coalition oriented politics of the States, the office of the Governor became the main centre of criticism and controversy in our political system. This office, which was once a luxurious and pleasant sinecure for defeated

and disgruntled politicians and ambitious civil servants, has now become very controversial.

The opposition parties have from time to time alleged that the office of the Governor is being misused by the central Government to promote its party interests in the States. The fact is that the 'parliamentary climate' and 'constitutional niceties' were so much vitiated that the Governors in various States were characterized as 'favourite boys' of the Centre, 'fallen horses' of the Congress and so on. This sorry state of affairs could have been avoided had the provisions pertaining to the office of the Governor been interpreted in somewhat harmonious way as certain set principles of constitutional law demand.

Sri Prakasa who was a Governor for many years, admitted that the position of the Governors is deteriorating day by day. Sri Prakasa observed that formerly Governors were invited to take part in many social and cultural activities, to lay foundation stones and open buildings. Even this is now becoming less and less. Their position is deteriorating day by day.

The split in the Congress in 1969 that followed the upheaval, transformed the office completely. A critical study of the circumstances, events, forces and the personalities responsible for this change, has been attempted.

Those who advocate the abolition of the office of the Governor do not realize that this office today symbolizes the unity of the country. The Governor keeps the Centre informed both of the urgent needs of the State as also of any movements that might tend to disturb the unity of the country.

He stands as the symbol of the State before representatives of foreign people and receives foreign visitors who may be representing very important departments of their own national life—administrative or cultural.

They may be utilized in propagating and making popular the policies of the government. The Governor can be the active helper and friend of the ministers. If the ministers know that the Governor is their friend and that he is a well-wisher of the State, there can, then, be continual co-operation between him and the Ministry. In this connection, we may refer to Article 167 of the Constitution. The Governor, thus, can be conversant with all important affairs administrative and financial of the State. He may easily exercise his influence over his Council of Ministers if he is active, intelligent, and a man of forceful personality.

Governors can play a positive role in their capacity as Chancellors to see that energies of the youths, which today lacked direction, were channellized along right lines.

Governors are not only Constitutional heads but were also the custodians of the intellectual and cultural life of the States. They should play an active role in the affairs of their areas. They should take special interest in the welfare of scheduled castes, scheduled tribes and minorities. They could also interest themselves actively in cleanliness campaigns and promotion of literacy. They might, again, play a soothing role whenever tensions occurred.

Finally, the Governor must come very prominently in the picture whenever there is any serious situation that might threaten the safety of the State and its

government. In case the Constitution breaks down in a State, the Governor must be prepared to take charge of the whole of the administration. The Governor and his advisers should be allowed to function with efficiency and speed without interference from the Centre in the day-to-day administration. Thus, in normal period, the Governor is the active helper and the friend of the Ministers; and in abnormal periods (during President's Rule) he governs the State on behalf of the President of India. He is also a link between the Centre and the States.

The most controversial issue among the eminent figures of the country is the method of appointment of the Governors. The proposal of appointing a Committee under Article 263 of the Constitution may solve the issue of the appointment of the Governors provided that the President of India appoints the men of non-partisan attitude in the Committee.

The controversial issue of the appointment of the Governors can further be solved by evolving the convention of consulting the State-Government in our federal set-up. It has been suggested that the Home Ministry may make a principle that merit is the only criterion and not the party affiliation. If the choice liberally extends for the persons with ability, maturity, impartiality, and administrative qualities the area of possible friction would, however, be narrowed.

SATYA NARAYANA SANGITA : POLITICS, BUREAUCRACY, AND
RURAL DEVELOPMENT IN ANDHRA PRADESH, Jawaharlal
Nehru University, 1984, *Supervisor* : K.Seshadri.

The Problem

There has been a continual debate in the developing countries since the Second World War about the strategies and models appropriate for improving the living conditions of the poor, especially the rural poor. At first the various countries followed policies of growth and development, but, as time passed, they realized that mere growth was not enough and that growth should go hand in hand with distributive justice. This led to new policies and threw up new problems, especially the problem of evolving an appropriate form of organization for undertaking an entirely new set of programmes.

During the 1970s many governments in Africa, Asia, and Latin America began experimenting not only with new approaches to the question of economic and social development, but also with new political and administrative arrangements for implementing developmental programmes and projects. There arose a trend towards decentralizing authority for planning and administration to regional, district, and local units, field units of Central Ministries, local governments, and special purpose organization as well as to non-governmental institutions and private associations.

This trend was due to three factors. First, there was disillusionment with the results of the highly centralized planning and control of developmental activities during the 1950s. There were the imperatives of the growth-with-equity policies of the 1970s and the compulsion to find ways of managing social development programmes. Finally, during the early 1980s, policy analysts realized that as societies became more complex and government activities expanded, it was increasingly difficult to plan and administer all developmental activities efficiently and effectively implemented. In any case the results of those policies have been disappointing. Relatively little attention has been paid in many developing countries to the formulation of policies in a way that improves their chances of being implemented effectively.

We in our country have also experienced similar problems. Many special programmes were taken up in the years following Independence for improving the conditions of poorer sections of society. These programmes entailed many changes in the structure of government at the Central, State, and district levels. These changes brought new concepts and principles to bear on the theories of organization and management especially at the district level. The most important among the features accquired by the district administration in the context of the implementation of developmental programmes are: multiplicity of functional agencies and autonomous specialized agencies, the setting up of governing bodies for special programmes, the involvement of financial institutions in the implementation of developmental programmes, preparation of block and credit plans, District and Block Consultative Committees, etc. These new features of the administration were accompanied by a number of unforeseen organizational gaps and institutional inadequacies. These gaps were serious enough to contribute to the failure of the policies and the programme.

Most studies view the problems of rural development from the view point of impact evaluation. The few studies which deal with performance evaluation do so from the administrative point of view by adopting what is called the compliance approach. That is why they focus on the structural and behavioural aspects of administration rather than on the political aspect.

It focuses on the East Godavari District of the State of Andhra Pradesh and makes a case study of it to bring out the manner of implementation of developmental programmes and the inadequacies responsible for the failure of the various programmes.

Unlike the earlier studies, it is concerned with both the political and administrative aspects of the policy implementation of rural development. It is based on a comprehensive approach so as to ensure that the field of vision embraces the entire rural scene, i.e. the various rural developmental activities in their totality, the objective being to evolve an appropriate politico-administrative organization for implementation at the field level.

Methodology

Most special programmes such as the Integrated Tribal Development Areas Programme (ITDAP), the Integrated Rural Development Programme (IRDP), the Integrated Mother and Child Development Programme, the National Rural Employment Programme (NREP), the Employment Guarantee Scheme, the Action Plan for the Scheduled Castes and the Backward Classes, etc. are being implemented in the East Godavari District. The study deals with all three levels—the district, block, and village levels. Five blocks with markedly different economic and demographic characteristics were selected to examine policy implementation and the resultant impact on the different environments. Three villages from each block were selected to assess the actual implementation.

The data used by the study are of both primary and secondary nature. The data were collected through the participant observation method. The researcher attended administrators' and political meetings and interviewed important leaders and functionaries to ascertain their views on the political-administrative aspects of rural development.

Findings

There are a number of studies on policy implementation carried out on the basis of impact evaluation. Very few studies deal specifically with performance evaluation. Even these confine themselves to the administrative point of view by adopting the compliance approach. They regard implementation as something which consists in carrying out tasks through the administrative machinery at the field level in accordance with the policies formulated at the higher levels.

The rural development programmes have gone through different phases. The programmes carried out in India so far can broadly be considered to consist of seven categories. Though the State is responsible for undertaking developmental programmes, the Union Government influences the final outcome. At the State level numerous departments are responsible for activities concerned with rural development. This creates problems of co-ordination. It is very common in the States for Chief Ministers to create Ministries, Departments, and corporations from political consideration rather than from the viewpoint of administrative efficiency.

Unlike at the State level, the Departments at the district level are loosely connected with one another, though the District Collector is associated with most of the Departments of the district. The association of the District Collector with numerous agencies has only resulted in inefficiency, non-performance, and corruption. Also most of the developmental departments are outside the purview of the elected representatives. Some important developmental departments have not been given the required status. Nor do they possess enough staff.

The study finds that it would not be wise to introduce the so-called *mandal* system in place of the block system. It has more disadvantages than advantages. Of

course, the present block administration is inadequate for implementing developmental programmes. It has also been weakened with the re-transfer of many of its functionaries to their original Departments. Many Departments, though operating within the jurisdiction of the block, are not under its control, thereby giving rise to problems of co-ordination. Also, too many Departments pursuing the same or similar objectives without any machinery to co-ordinate their work have resulted in duplication of work, wastage of resources, and diffusion of responsibilities.

At the village level too we have a multiplicity of policy-making bodies as well as administrative functionaries having no organic link, though their purpose is the same. The result, again, is wasteful duplication of work, non-utilization of resources, and non-accountability of the Government functionaries to the elected representatives.

The socio-economic background of the political and administrative leaders reveals that they are not representing the masses. Both administrative and political leaders are well educated in comparison to the illiterate masses. The upper castes dominate both the political and administrative leadership. The backward classes are not adequately represented though they constitute the majority of the district population. The political leadership is dominated by the Congress Party. The administrators at the block level profess to adhere to the policies and programmes of the Congress Party. Strangely, most of the elected representatives are unaware of developmental programmes and of *Panchayati Raj*.

The administrators at the block level are not happy with their service conditions. This is ultimately bound to affect the performance of developmental programmes. An important factor for their apathy is poor promotional avenues. Promotional chances in the various Departments are not uniform. Promotional chances are very few in the developmental Departments. There are people who have not earned a single promotion in their entire career. There are also some people who have taken two to three decades to get a promotion.

A large number of policy-making bodies are involved in the decision-making process, though the membership of these bodies is more or less the same. The policy-making capacity of the standing committees is only notional when compared with other policy-making bodies. The standing committees are not vested with adequate powers. Officers are indifferent to the meetings of these standing committees. Indeed the meetings serve no useful purpose. (The District Collector is all in all in the decision-making process.)

The elected representatives often approach the administrators for personal favours rather than for the furtherance of the public interest. They are not serious about educating the people about the various developmental activities and seeking their co-operation. They rarely attend the credit camps that are organized for selecting the beneficiaries of the IRDP. They also do not play effectively the watchdog role expected of them to check the sins of omission and commission of the administrators at the various stages of implementation.

Three types of plans are prepared at the district level—sectoral, non-sectoral, and district credit plans. There is no comprehensive plan for the entire district. The

non-sectoral and district credit plans are more meaningful and relevant to the local people. However, not enough exercise is done to ascertain the growth potential of the area, the resources needed, the level of implementation of the on going programmes, the needs of the people, etc. The Department of Statistics has neither adequate technical staff nor the necessary facilities to prepare a plan for the entire district.

Many irregularities are committed while identifying beneficiaries. In some cases, wrong persons are selected just to fulfill targets. It is also noticed that there is a wide gap between the application sponsored by the block staff and the applications sanctioned by the bankers. This is due to the indifference of the bankers, procedural rigidities, non-fulfillment of the bank requirements, non-availability of infrastructural facilities, etc. Many irregularities are committed while procuring assets for the IRDP beneficiaries. The assets acquired are in most cases inferior. The bankers and the officers concerned with the procurement acquire substandard assets in connivance with the middlemen.

There is no arrangement yet for monitoring the impact of the programmes. Of course, the implementation of the programme is reviewed from time to time by the District Consultative Committee to find out the bottlenecks holding up progress so that necessary action may be taken to remove them.

RAM SINGH AWANA : CONGRESS FORUM FOR SOCIALIST ACTION — A CRITICAL STUDY OF A PRESSURE GROUP OPERATING WITHIN THE CONGRESS PARTY OF INDIA, 1962-73.

University of Meerut, 1984, *Supervisors* : J.C.Johari and Parmatma Sharan.

The Problem

The study highlights the problem of an institutional and ideological pressure group known as Congress Forum for Socialist Action (C.F.S.A.) which operated inside the organization of a predominant and ruling political party, the Indian National Congress for little more than a decade beginning from mid-1962 and ending in early 1973. The period under study was a turning phase in the functioning of the ruling Congress in the post-independence era when the political developments in India became more issue-oriented and also passed through a major fission. The group C.F.S.A. raised progressive and left-oriented issues, and claimed to have a firm faith in the theory of action for socialist programmes. For achieving its goal of establishing a socialist society in India, it impressed and pressurized strategically both the party high command and the government, and ultimately was successful in

achieving a lot when the Congress party and the government adopted most of its policies and programmes. This proved that C.F.S.A. operated as an ideological and institutional pressure group inside the Congress organization and its government. The study is centre-based, and except for a few references, it has not dealt with comprehensively the functioning of C.F.S.A. in various states.

Methodology

Since the nature of this work is mainly historical, behavioural, and of programme and problem-oriented, the research methodology, therefore, is of historical, behavioural, and of the survey type. Empirical testing was conducted while examining the Forum's implications and effectiveness in moulding the Congress policies and programmes towards progressivism and of socialistic orientations. The subject has been taken issue-wise and in a chronological order. For the conceptual framework of the study and its descriptive and analytical part, the material and data were collected both from the primary and secondary sources. The former are interviews and informal discussions with C.F.S.A. leaders, and consulting their personal record files on the functioning and activities of the group. Besides, the Forum's publications and documents like journals, periodicals, books, newsletters, pamphlets, souvenirs, circulars, letters, C.F.S.A. leaders' writings were consulted. The secondary sources are A.I.C.C. publications, government documents, books, journals, periodicals, newspapers — national, international and regional — and chronologies like *Asian Recorder* (Delhi), *Indian Affairs Record* (New Delhi), *Keesing's Contemporary Archives* (London) etc.

Findings

It has been noted that the organization of the dominant party system in a developing country consists of various viewpoints and ideologies of the emerging influential or pressure groups which may be of sectional and ideological nature and that in turn contributes to the operation of the political system.

Ideological pressure group emerged inside Congress party in June 1962 in the name of 'Congress Forum For Socialist Action' and continued till April 1973. It worked for public policy matters of socialistic orientations rather than vested interests. Therefore, the study defined the term pressure group 'as a voluntary organization which aims at influencing the policies of political party irrespective of its being in power and the government and may operate from within the political party or outside it and has national interests as its sole goal, besides having vested interests.' Forum established its own organization by adopting a 'scheme', appointed two conveners and formed a Steering Committee of 17 members, established its parliamentary unit in the Lok Sabha, formed units in almost all the states as well as at the district and tahsil levels throughout the country.

The issues undertaken by the Forum were like ceiling on urban property, state trading in foodgrains and implementation of 10-Point economic programmes like social control of banks, nationalization of general insurance, take-over of import-export trade, state-trading in foodgrains, effective steps to curb monopolies and concentration of economic power, land reforms, and removal of privileges enjoyed by the ex-rulers. The group also functioned to make the Congress party as a work-oriented and cadre-based organization.

Through its pressure tactics, Forum's important achievements were to insert the word 'socialist' in the preamble of the party's constitution in January 1964. Its confrontation course led to the purge inside the Congress party in late 1969. After the Fifth general elections of Lok Sabha in 1971, the group was successful in getting through three constitutional amendments — 24th, 25th and 26th Amendment Acts passed. These amendments restored to the Parliament its supremacy particularly in the matter of fundamental rights, assigned primacy to the directive principles of State Policy to bring forth socio-economic change, and abolished the privileges and privy purses of the princes. Forum's major gain was also to influence the government to shift India's foreign policy in favour of socialist bloc in comparison to the Western countries.

Like other pressure groups, the C.F.S.A. applied different techniques and methods to attain its socialist objectives. It published various journals and periodicals, quarterly (like *Congress Forum*) and fortnightly (like *Socialist Congressman*), 'pamphlets', 'booklets' and 'newsletters', organized 'seminars' and 'symposiums' on 'Bank Nationalisation', 'Unity of Socialist Forces' and 'Danger of Right Reaction' etc. The group applied Gandhian, democratic, and trade union techniques to pressurize the Congress High Command and government to adopt the socialistic policies.

Due to the Forum's ascending position both in party organization and the government, the leadership particularly the Prime Minister, Mrs. Gandhi was annoyed with its challenging and disturbing activities after the 1971 Lok Sabha elections. To retain her position, 'the Prime Minister sounded another section of the party to form another new countervailing group within its organization. This led to the formation of another forum known as 'Nehru Study Forum'. Consequently, there started bickerings both (verbal and written) between the two Forums. Another strategy, i.e. the policy of 'divide and rule' was applied inside the C.F.S.A. in which frictions and factional feuds started among the ex-communist and ex-socialist and white-coloured (i.e. Prime Minister's loyal supporters) sections of the Forum. Lack of ideological convictions among some of the C.F.S.A. members who were aspiring for power and position led the group towards embarrassing situations.

Thus withdrawal of the Prime Minister's support, emergence of a countervailing group inside the party, intra-group conflicts and lack of ideological convictions among the group leaders are the important reasons for the downfall and disbandment of an ideological pressure group. C.F.S.A. was formally disbanded by its Central Steering Committee on 16 April 1973 after little more than a decade of its existence. It proves that ideological and institutional pressure groups may emerge out of

similarity of interests, convictions, and individual loyalties against the existing traditional or sectional groups inside the predominant party in a developing and democratic polity, but can exist, persist and function properly with the patronage of the head of the government. Whatever the Forum could achieve during its course of existence, it was mostly due to the support and patronage of the Prime Ministers like Pt. Nehru and then Mrs. Gandhi. However, groups of ideological preferences contribute a lot because of their comprehensive attitudes towards serving national interests, identifying themselves with the political system of socialistic orientations and working on empirical lines which provide them with stability, encourage pluralism, and finally maintain internally the democratic functioning of the ruling political party.

Psychology

SHER SINGH BEEDAWAT: A STUDY OF ACADEMIC UNDER-ACHIEVEMENT AMONG STUDENTS, University of Rajasthan, 1976, *Supervisor*: G.L. Julka.

The Problem

Objectives

THE FOLLOWING are the major objectives of this study.

- 1 To study the incidence of academic underachievement among students of class IX of the secondary schools of Bikaner Division, Rajasthan.
- 2 To study the factors related to academic underachievement.
- 3 To make a comparative study of incidence of underachievement among boys and girls.
- 4 To make a comparative study of incidence of underachievement in rural and urban areas.
- 5 To make comparative studies of under-achievers, over-achievers, and average-achievers in relation to their (a) personality characteristics, (b) personality adjustment, (c) motivation, and (d) study-habits with a purpose to find out the factors related to underachievement.
- 6 To study relationship between intelligence scores of underachievers and scores on (a) personality characteristics (14.PF Test), (b) Factors of personality adjustment, (c) Factors of Index of motivation, and (d) study habits.
- 7 To make ten case studies of extreme cases of underachievement with a purpose to identify factors responsible for underachievement.

Methodology

Sample was drawn by random sampling method. Data were collected with the help of (1) Cattell's 14-PF(HSPQ), (2) Personality Adjustment Inventory (Dr. Ms. L. Saxena), (3) Junior Index of Motivation (JIM School by Jack R. Frymier), and (4) Study habit inventory (S.N.Rao).

Interview technique as well as questionnaire technique was adopted for data collection.

Data were analysed by applying univariate analysis of variance, 't' test, 'z' test, percentage and product moment correlation.

Findings

1. The intensity of incidence of underachievement is more or less uniform in the urban and rural areas.

2. The difference of sex has nothing to do with its intensity.

3. The incidence of underachievement is significantly higher in the schools: underachievement in the science group is the biggest of all the groups.

5. The proportion of underachievers among girls was larger than that among the boys.

6. Very few of the underachievers were found to be outgoing, warm hearted, easy-going, and participating by nature though quite a few were found to belong to the category of the reserved cold-hearted, critical, and detached persons.

7. It was found that more than 75 per cent of the students among the under-achievers possessed average emotional stability.

8. A very small percentage, i.e. 40 per cent was found to be possessing qualities like impulsively lively and gay enthusiastic.

9. Under-achievers are neither over-protected and dependent nor they are completely self-reliant and realistic.

10. Higher percentage of Arts students was found to be undisciplined, careless of protocol, generally followers of their own urges and having low integration of personality.

11. The analysis on personality adjustment revealed that only 1 per cent was 'Excellent' and 46 per cent 'Satisfactory' in the said adjustment which was followed by 34 per cent having 'good' and 19 per cent having 'unsatisfactory' adjustment.

12. Motivation of the Arts faculty students was found to be the lowest among the three faculties whereas the same among the science students was the highest.

13. Poor or bad study habits are not solely responsible for under-achievement.

V. R. THAKKAR: A STUDY OF POTENTIAL TEACHERS' EFFECTIVENESS: THEIR EDUCATIONAL ATTITUDES IN RELATION TO THEIR RAPPORT WITH THE STUDENTS AND THEIR SURVIVAL AND JOB SATISFACTION IN THE PROFESSION, M.S. University, 1978, *Supervisor*: A.S. Patel.

The Problem

The specific objectives of the study were:

1. To study if teachers with high rapport (as related by pupils) differ significantly from teachers with low rapport, in their educational attitudes.
2. To examine if teachers with stronger tendency for survival differ in their educational attitudes from those with less intense tendency for survival.
3. To investigate the relationship between survival and rapport.
4. To investigate the relationship between job-satisfaction and rapport.
5. To investigate the relationship between age and rapport.
6. To investigate the relationship between experience and rapport.

Methodology

Sample

The sample consisted of 497 trainees studying in B.Ed. degree classes in the year 1974. Among 497 trainees, 240 were males and 257 were females; 380 were Arts graduates and 117 were Science graduates. They were of different age groups and levels of experience; experience varied from nil to 27 yrs and age from 21 years to 50 years.

The study is limited to the area of Gujarat State only. The period is also delimited to the trainees who were under training in 1974 in the selected colleges of Gujarat.

Tools

The following five tools were used.

1. Educational Opinion Inventory (EOI) with two parts one called "R" Scale and the other called "S" Scale.
2. The Pupil Inventory.
3. Teacher Efficiency Inventory (Part I and II).
4. Survival Scale.

5. Job-satisfaction Scale.

"R" Scale (62 items) and "S" (66) Items) were distributed into five categories, namely goal of education, teaching beliefs, student characteristics, teaching as practice as well as grading, and evaluation. Teacher Efficiency Inventory (TEI) items (50) were distributed into six categories including five categories of "R" Scale and "S" Scale and one more on teacher characteristics. In TEI part II there were 30 statements based on the classroom situations.

Scoring:

"R" Scale items, "S" Scale items and TEI Part I items are on five point scale and they have been scored by giving 5,4,3,2, and 1 marks to positive items and 1,2,3,4 and 5 marks to negative items. TEI Part II is in a multiple choice format and it has been scored by giving 1 mark to each correct response.

The Pupil Inventory is on a five point scale with 20 items. It was scored by giving 5,4,3,2 and one marks to positive items and 1,2,3,4 and 5 marks to negative items.

Every teacher was rated by five pupils on the Pupil Inventory. The addition of the scores of all the five pupils on the Pupil Inventory was divided by five to find out the average for each teacher. The mean was the rapport score of that teacher: 497 teachers of the sample were scored on rapport and the mean was found. It was 77.6: on the basis of mean of rapport scores 497 were divided into two groups, namely H.R. Teachers (284) and L.R. teachers (213).

Survival and Job-Satisfaction scale were on the five-point scale and they were also scored as "R" and "S" Scales. Survivors and non-survivors were distinguished on the basis of Survival Scale Score. The mean was calculated (23). The teacher at and above the mean were survivors and below mean were non-survivors.

Besides studying the differences between high rapport and low rapport groups of teachers on a number of educational issues and attitudes, the data on rapport were related also to (1) Survival (2) Job Satisfaction (3) Age, and (4) Experience.

All these data were statistically analysed with adequate statistical techniques, such as use of t-test, chi-square test, and contingency correlation method based on chi-square test. The analysis warranted the following inferences.

Findings

1 It was observed from scores on "R" Scale that there was no statistically significant difference in most of the categories of educational issues and attitudes, between the high rapport teachers and low rapport teachers. From mean scores of all the six categories it was observed that with respect to goals of education, teaching beliefs, students characteristics as well as grading and evaluation, the mean score of high rapport teachers was somewhat higher than that of low rapport teachers.

It revealed that high rapport teachers had somewhat more positive attitude than low rapport teachers towards these categories, while in two categories, namely, teaching as practice and teachers characteristics, low rapport teachers were having somewhat more positive attitude towards these two categories than high rapport teacher.

2 The scores obtained on "S" Scale items repeated that in four categories, namely goals of education, teaching beliefs, students' characteristics, and teaching as practice, the difference between the attitude of survivors and non-survivors was not significant. Only in one category, namely, grading, and evaluation, the difference was found to be significant. In four categories, namely goals of education, teaching beliefs, teaching as practice as well as grading and evaluation it was observed that the mean score of survivors was higher than that of non-survivors, while in third category (student characteristics) mean score of non-survivors was higher than that of survivors. It revealed that the survivors were having positive attitude in four categories as mentioned above while in one category non-survivors were having higher positive attitude.

3 It was also observed that there existed significant correlation between age and rapport; there was also positive correlation between job-satisfaction and rapport but there was found no correlation between experience and rapport as well as survival and rapport.

It was further observed that there existed negative correlation between age and rapport, i.e. as the age increased, the rapport decreased. Positive correlation was found between job-satisfaction and rapport, i.e. as the job satisfaction increased, rapport also increased. It is somewhat strange that the results did not show any correlation between experience and rapport as well as between survival and rapport.

It is suggested that further investigations should be undertaken on the same time with more refined tools and controls to investigate the relationships between variables selected in this study. Moreover, differences between the attitudes of the graduate teachers having degree in same subjects and sex differences between their attitudes in relation to rapport may also be undertaken.

At the same time it should be also borne in mind that the sample studied by the present investigator somehow failed to show statistically significant difference between high rapport and low rapport teachers on some of the educational issues and attitudes expressed in items on "R" Scale and "S" Scale, though there was a trend of somewhat higher positive attitude of high rapport groups. This may be attributed partly to perhaps social desirability of items experienced unconsciously by all the teacher respondents as such and partly to perhaps lack of refinement in tools and controls of measurement. It is suggested that further studies may be carried out with more controls. Yet, it is felt that tools used here would serve useful purpose in selection for the teaching profession.

MOHAMMAD GHALIB HUSSAIN: RECALL OF FINISHED AND INTERRUPTED TASKS UNDER EGO- AND TASK- ORIENTED CONDITIONS IN RELATION TO 'ANXIETY', 'n-ACHIEVEMENT', 'n-APPROVAL MOTIVE' AS PERSONALITY VARIABLES, University of Bihar, 1973, *Supervisor: Azimur Rahman.*

The Problem

Lewin's idea of 'tension system' led Zeigarnik (1927) to verify it experimentally. She for the first time conducted experiments on the recall of 'completed and Interrupted' tasks. Her assumptions were that tension would be established if the subjects were given certain tasks to perform and were allowed to finish some of them. The persistence of the tension created due to the interruption of the tasks would result in a greater likelihood of superior recall of the tasks. She found that the subjects recalled interrupted tasks better than the completed tasks. This was designated as 'Zeigarnik Phenomena'. She interpreted her findings as the tasks which were interrupted produced a tension in the individual's system and established a 'Quasi-need' which pressed itself in the direction of the fulfilment of the intention hence recalled better.

Zeigarnik's pioneer attempt to verify Lewin's theory of tension system was followed by a large number of experimental studies. Besides sizeable number of studies supporting the findings of Zeigarnik there were other studies which showed contrasting results. The findings of Rosenzweig, Rosenweig, and Mason and many others showed better recall of completed tasks than interrupted ones. These studies argued that interrupted tasks which gave feeling of failure were repressed and the completed tasks which gave feeling of success were better remembered.

These findings by Zeigarnik and others on the one hand and Rosenzweig and others on the other hand are either in support of Lewin's theory of tension system or Freuds' repression mechanism are conflicting. Attempts were, however, made to reconcile the two contradictory findings by introducing ego- and task-oriented conditions. Personality variable was also considered to be an important factor influencing the recall of completed -interrupted tasks.

The effect of personality variable was also not found significant on the recall of completed-interrupted tasks. The present study intends to see the combined effect of ego- and task-oriented conditions and personality variables on the recall of completed-interrupted tasks.

Methodology

Three personality variables, namely anxiety, n-achievement, and n-Approval motive, were undertaken. Sinha Anxiety Scale, Mukherji's Completion Test and

Marlowe-Crowne Social Desirability Scale were administered for the measurement of respective personality variables. The study was carried out into two phases, i.e. pilot study and the main study. In the pilot study only two personality variables, anxiety and n-achievement, were undertaken. Four groups of subjects between 14 and 30 years were formed in such a way that the groups contained Ss high in one variable and low in another, high in both and low in both, and low in one and high in another (H-L, L-H, L-L, H-H). The subjects scoring above 60th percentile were considered to be high and below 40th percentile were considered to be low in their respective personality tests. In the main study all the three personality variables were undertaken in their high and low levels meant scores above 75th P and below 25th P respectively. Instead of dichotomization, in this study those subjects were taken whose scores were either high and low in one variable and between Q1 and Q3 in other two variables. In this way 6 groups of 32 subjects each formed were and matched on memory. Each group of both the pilot and the main studies were divided into two subgroups to work under ego- and task-oriented conditions. Verbal instructions were given to make the experimental conditions either ego- or task-oriented. All the subjects were presented a set of 20 paper-pencil and manual tasks to perform and were interrupted on half of the tasks. After the experiment was over recall scores of each subject was obtained by RU/RC method. As the pilot study and the main study had $2 \times 2 \times 2$ and $3 \times 2 \times 2$ factorial designs respectively analysis of variance and t-test were applied to see the significance of differences.

Findings

The results of the pilot study revealed that personality variables alone do not affect the recall of C/I tasks while the ego- and task-oriented conditions markedly influenced the recall of C/I tasks. But the results showed that anxiety and n-achievement variables influence the recall of C/I tasks when these are either under ego- or task-oriented conditions. The high and low levels of personality could also not show any influence on the recall of C/I tasks.

The results obtained in the main study showed that personality variables and ego- and task-oriented conditions influence the selective recall both independently and in their interactions. But the two levels of personality did not affect the selective recall independently but these could influence under any condition of task— and ego- orientations.

T.R. BHATIA: AN EXPERIMENTAL STUDY OF THE EFFECT OF RECIPROCAL INHIBITION THERAPY ON ANXIETY IN ADOLESCENTS, University Of Delhi, 1979, *Supervisor*: N.K. Dutt and N.N. Sen.

The Problem

The study which is basically experimental in design but also includes survey and clinical aspects has been undertaken to find out the effect of Reciprocal Inhibition Therapy on anxiety in adolescents.

The objectives of the study were:

1. To study the incidence and pattern of anxiety in adolescents of Delhi.
2. To find out the relationship amongst anxiety as a whole and its various components.
3. To study the differential effect of Reciprocal Inhibition Therapy on anxiety as a whole and its various components.
4. To train the subjects in the technique of autorelaxation.

Hypotheses

Two hypotheses were formulated for the purpose and tested. They were:

1. Reciprocal Inhibition Therapy reduces anxiety considerably and significantly.
2. Reciprocal Inhibition Therapy controls ergic tension and somatic components more than other components of anxiety.

Since anxiety is the hub of all serious mental disorders, to control it, even if partially, is a great step forward. But, 'to control' does not mean to annihilate. Since anxiety is also a drive and lies at the base of positive growth, to annihilate it would be tantamount to cutting at the root of all growth. Therefore the chief aim of all therapies should be to enable an individual to overcome his anxiety in a constructive and integrative way, i.e. by effecting expansion in his area of awareness and activity.

The following categories of therapies for controlling anxiety were considered: 1. Drug Therapies, 2. Psychoanalysis, 3. Yoga, and 4. Behaviour Therapy.

Methodology

The experiment had four basic procedural features. These were:

1. Pre-treatment Procedure
2. 'Treatment Proper' Procedure

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3. Post-treatment Procedure
4. Data analysis Procedure.

Pre-treatment Procedure

Dutt Personality Inventory (DPI) and Serf Personality Inventory (SPI) were administered to 523 9th and 10th grade students of three schools of Delhi, out of which high anxious group (117 students) was taken. Seventeen students dropped and 100 students were divided into two equivalent groups, namely Experimental and Control Groups.

Treatment Procedure

Treatment procedure includes 'Therapy Proper', namely the Progressive Relaxation Therapy, instructions given to the subjects, and precautions taken before starting the therapy.

In all, the Experimental Group had between 30 and 40 sessions of the therapy with the investigator during the following 12-week period. Each session was of 20-40 minutes duration and each subject received the training thrice a week. In addition to the training sessions with the investigator, the subjects were instructed to practise relaxation twice a day at home for 20-40 minutes at a time both in the morning and in the evening (once a day on the day of training sessions.) The subjects were given a 'manual' summarizing the relaxation procedures to help guide their practice and a 'Progress Schedule' to record specific details of their experiences each time they practised.

Post-treatment Procedure

Post-treatment procedural details consisted of description of post-treatment assessment which included evaluation through criterion measures (DPI) and SPI, Self-evaluation Report, and evaluation of intensive structured interview, concluded by a brief of an informal follow-up assessment after six months of the therapy.

Data Analysis Procedure

Data analysis procedure described various statistical tests of significance; procedure for obtaining reliability and validity of DPI and SPI; procedure for computing incidence and pattern of anxiety amongst adolescents of Delhi; procedure for finding intercorrelations amongst anxiety as a whole and its various components; factor analysing the scores of nine components of DPI, four components of SPI, and thirteen components of DIP and SPI pooled together; and applying analysis of covariance for testing the significance of the differences between means of final experimental data by taking into account and adjusting initial differences in the data.

Findings

1. Anxiety as a whole, and each of its nine components were almost normally distributed in the population under study. This normal distribution of the nine components along with 'global anxiety' spoke of the internal consistency of the inventories indirectly, and a statistician might be happy over it as well as over the Gaussian slope. But it was a matter of concern for a clinical psychologist and a mental hygienist. If the distribution of anxiety among adolescents at such a tender and pliable age with ebullient energy was normal, with 18 per cent who definitely require psychotherapeutic help, what would happen to the same population in their adult life when they faced the ghastly reality of life, full of cut-throat competition and spiritual disorientation?

2. In the case of Dutt Personality Inventory, Component x Component Correlations ranged from 0.22 to 0.58 and Component x Total Correlations ranged from 0.53 to 0.81. In the case of Sen Personality Inventory, the Component x Component Correlations ranged from 0.35 to 0.57 and Component x Total Correlations ranged from 0.66 to 0.88. These figures again pointed out towards 'Oneness' of the Components of both the tests.

3. On factorial analysis, DPI yielded three factors which could arbitrarily be named as: (i) Emotionality (ii) Somatic Concern, and (iii) Fear-Guilt Complex.

These factors were 'statistical entity' and not necessarily a 'clinical concept'. Even then 'anxiety in the area of emotions, anxiety in the body', and 'anxiety in the deeper dynamics of mind, like fear and guilt' were clearly discernible. Clinical reports from patients of anxiety neurosis describing anxiety syndrome also discussed symptoms under these heads.

The factorial analysis of SPI yielded only one factor which later merged with those of DPI when both the tests were submitted to factorial analysis. The factorial analysis of the tests was not the main purpose of the study but this threw a valuable light on the nature of anxiety as a syndrome.

4. All the differences between 'Post-treatment Experimental Group' and Post-treatment Control Group 'Means on Total Anxiety Scores and Scores on Anxiety Components were significant at 0.01 level, except in the case of 'Guilt Proneness' of DPI. Subjects, after treatment, decreased Total Anxiety and each Component of Anxiety except on 'Guilt Proneness'. The reason was not far to seek. Guilt feeling was more deeply based and started its development from early childhood as a conditioned response. Psychoanalysis bore testimony to this view. The effect of relaxation for long on a 'Conditioned Reflect' like guilt feeling could not be predicted at present. Thus hypothesis 1 was upheld.

5. Relaxation therapy helped in the control of 'Emotional Instability' the maximum. It did reduce 'Ergic Tension' and 'Somatic Reactions' but not more than other components of anxiety. Thus hypothesis 2 was rejected. This finding proved the inter dependability of body and mind, especially in anxiety.

All these findings point out towards the nature of anxiety as well as relaxation therapy. Anxiety is an all-pervasive unpleasant emotion which is normally distributed in the adolescents of Delhi schools. It is identifiable, measurable through psychological tests, and manageable through relaxation therapy.

HOOSHANG JAHANGIRI: MANAGERIAL EFFECTIVENESS IN RELATION TO PERSONALITY, OCCUPATIONAL GOAL VALUES, LEADERSHIP STYLE, AND ORGANIZATIONAL CLIMATES IN EDUCATIONAL INSTITUTIONS, Panjab University, 1983.

The Problem

Effectiveness is a widely used, abused or over used term in the area of managerial functions. It has been associated with personality trait, social status, satisfaction of personal objectives rather than with the objectives of organization. For some, effectiveness concerns itself with the input of effort into all areas of activity; to others, it suggests efficient productive performance (Mahoney and Weitzel, 1969) or success in terms of goals attainment and adaptability (Ghora, 1970). Drucker (1974) regards effectiveness as the very essence of the job of the executive. Stogdill (1957) defined effectiveness in terms of (1) the group's output; (2) its morale; (3) the satisfaction of its members.

Of course efficiency is important. Even a manager with high degree of effectiveness cannot deal properly with the environmental demands on account of poor efficiency. But even a most efficient manager cannot attain the extent to which the desired is expected, if it is efficient in doing the wrong things, that is if it lacks effectiveness. Efficiency is concerned with doing things right. Effectiveness is doing right things.

Despite the immense outpouring of educational services from the existing institutions, yet, a feeling prevails that the quality of services is deteriorating. While we really do not know to what extent the success or failure of existing educational institutions is due to the leadership ability a man brings with him and to what extent to the many other factors which affect the fortunes of these institutions, there is little doubt that we hold the leader responsible for success and failure (Fiedler, 1967). Though managers generally know what action will improve things, but they often do not take them. There is a tremendous gap between what managers know about being effective and what actually apply. The main limiting factor as stated by Reddin (1970), is a "behavioural one"

This investigation was designed in such a way that the focus should be on the results of manager's job. The theoretical framework was adopted from Reddin's 3-D management model (1970). When it is seen this way, effectiveness is the extent to which a manager achieves the output requirements of his position. The third

dimension of effectiveness has been incorporated in the theory along with the dimensions of Task and Relation Orientation. Thus, the effectiveness depends upon the requirements of situation—Subordinate, Superior, Co-worker's expectation, and styles as well as dictates of technology in an organizational setting. If the situational requirements and the managerial style are in line with each other one obtains effectiveness and if they contradict each other it leads to ineffectiveness. The ultimate test, of course, is the degree to which the behaviour chosen, prove actually appropriate, i.e. effective, as measured by the criterion of goal attainment.

Parsons and Shils (1965) stated that behaviour is a function of individual's situational, physical, social, and psychological variables. On the basis of this observation and the foregoing analysis it would be expected that the managerial effectiveness will differ on the variable chosen to study, viz. personality, occupational goal values, leadership style, and organizational climates.

Methodology

Sample and Procedure

The data were obtained from 69 Government and private educational institutions located in the U.T., Chandigarh. A sample of 200 respondents drawn from these institutes, included 101 male and 99 female managers, falling in three age groups.

Instruments

The following tests were used:

1. Basic-style Indicator Questionnaire by Reddin (1970)
2. Eysenck Personality Inventory by (Eysenck and Eysenck, 1964)
3. Inventory nine occupational goal values dimension by Rosenberg (1957) and Rokeach (1968).
4. Inventory of your managerial styles by Reddin (1970).
5. Organizational climate questionnaire by Kolb, Rubin and McIntyre (1974).

Statistical Treatment

The data were subjected to following statistical analysis:

1. Mean, percentage, and Rank analysis.
2. Inter-correlation for establishing relations between variables of the study.
3. Factor analysis

In addition, managerial profiles were prepared with reference to personality, occupational goal values, leadership style, and organizational climate.

Findings

1 The study of managerial basic style has established that educational administrators have a greater preference for Task-orientation rather than Relation-orientation. In other words, they showed the pattern of dedicated basic style followed by Integrated and Related basic style.

2 Effectiveness was found not to be a function of corporate ownership (Government and Private sections).

3 Sex, and age differences were found not to be the determinant factor on managerial effectiveness.

4 Effectiveness has been found not to be affected by two major dimensions of personality, namely extraversion/introversion and neuroticism.

5 Effectiveness has not emerged to be a function of either extrinsic or intrinsic goal values, although the managers have shown a greater tendency towards adopting intrinsic values in their professional life.

6 Effectiveness has been found not to be a function of a particular leadership style. But, rather a style, appropriate to the demand of a given situation.

7 Effectiveness was found not to be directly determined by the organizational climate dimensions.

8 Effectiveness has been found to be significantly influenced by the managerial basic style.

RAM PRAKASH GUPTA: DEFENCE AWARENESS IN INDIANS: AN INTER-DISCIPLINARY STUDY OF PSYCHOLOGICAL ASPECTS OF DEFENCE AWARENESS, University of Kumaun, 1983, *Supervisor*: Virender Sinha and Suresh Bahadur.

The Problem

The term 'Defence Awareness' in this study is defined as the extent to which a man thinks about the security of his nation and the ways in which he is ready to sacrifice for the nation's security. Pithoragarh district is selected for the area of study as it is a border district of Kumaun region of Uttar Pradesh having common border with China and Nepal. From the very beginning this district has been providing a large number of military personnel and it is estimated that each family of Pithoragarh District provides at least one member to the Armed Forces of India.

Objectives

1. To find out the residential (urban/rural) differences in defence awareness.
2. To find out the caste differences in defence awareness.

3. To find out the age differences in defence awareness.
4. To find out the educational difference in defence awareness.

Hypotheses

For the study, the following null-hypotheses are formulated:

1. There is no significant difference in defence awareness of urban and rural people.

This hypothesis is framed to explore the residence (urban-rural) differences in the defence awareness. It assumes that the defence awareness is not significantly different in urban and rural people of the Pithoragarh District.

The defence awareness is manifested in a number of ways and directions. That is why the first null hypothesis is divided into five following sub-hypotheses according to the five areas of the defence awareness.

- 1.1 There is no significant difference in urban and rural people in the area of national security of defence awareness.
- 1.2 There is no significant difference in urban and rural people in the area of military service of defence awareness.
- 1.3 There is no significant difference in urban and rural people in the area of psychological factors of defence awareness.
- 1.4 There is no significant difference in urban and rural people in the area of enmity factors of defence awareness.
- 1.5 There is no significant difference in urban and rural people in the area of effect of war on defence awareness.

There is no significant difference in defence awareness of the people of different castes .

2. This hypothesis is framed to explore the caste difference in defence awareness. It assumes that the caste status does not significantly affect the defence awareness. We included only three castes, i.e. Kshatriya, Brahmin, and Scheduled caste to explore the influence of caste status on the defence awareness.

Defence awareness is manifested in a number of ways and directions. Hence, the researcher has divided the second null hypothesis into 15 sub-hypotheses according to the five areas of defence awareness and three categories of caste.

- 2.1 There is no significant difference between Kshatriya and Brahmin in the area of national security of defence awareness.
- 2.2 There is no significant difference between Kshatriya and Brahmin in the area of military service of defence awareness.
- 2.3 There is no significant difference between Kshatriya and Brahmin in the area of psychological factors of defence awareness.
- 2.4 There is no significant difference between Kshatriya and Brahmin in the area of enmity factors of defence awareness.
- 2.5 There is no significant difference between Kshatriya and Brahmin in

the area of effects of war of defence awareness.

- 2.6 There is no significant difference between Kshatriya and Scheduled caste in the area of national security of defence awareness.
- 2.7 There is no significant difference between Kshatriya and Scheduled caste in the area of military service of defence awareness.
- 2.8 There is no significant difference between Kshatriya and Scheduled caste in the area of psychological factors of defence awareness.
- 2.9 There is no significant difference between Kshatriya and Scheduled caste in the area of enmity factors of defence awareness.
- 2.10 There is no significant difference between Kshatriya and Scheduled caste in the area of effects of war of defence awareness.
- 2.11 There is no significant difference between Brahmin and Scheduled caste in the area of national security of defence awareness.
- 2.12 There is no significant difference between Brahmin and Scheduled caste in the area of military service of defence awareness.
- 2.13 There is no significant difference between Brahmin and Scheduled caste in the area of psychological factors of defence awareness. -
- 2.14 There is no significant difference between Brahmin and Scheduled caste in the area of enmity factors of defence awareness.
- 2.15 There is no significant difference between Brahmin and Scheduled caste in the area of effects of war of defence awareness.

3 There is no significant difference in defence awareness of the people of different age .

This hypothesis is formulated to explore the age difference in the defence awareness. It is based on the assumption that the defence awareness is not bound by the different chronological levels of development. We have selected in the investigation three age levels i.e. youth (13-20 years), adulthood (21-35 years), and middle age (36-45 years) were selected to explore the influence of age on the extent of defence awareness. It is assumed that difference is not significant in the defence awareness of the above mentioned three levels of age.

Since defence awareness is manifested in five ways, the researcher has divided this null hypothesis into 15 sub-hypotheses based on the five areas of defence awareness and three levels of age as mentioned above.

- 3.1 There is no significant difference between youth and adult in the area of national security of defence awareness. .
- 3.2 There is no significant difference between youth and adult in the area of military service of defence awareness.
- 3.3 There is no significant difference between youth and adult in the area of psychological factors of defence awareness.
- 3.4 There is no significant difference between youth and adult in the area of enmity factors of defence awareness.
- 3.5 There is no significant difference between youth and adult in the area of effects of war of defence awareness.

- 3.6 There is no significant difference between youth and middle aged people in the area of national security of defence awareness.
- 3.7 There is no significant difference between youth and middle aged people in the area of military service of defence awareness.
- 3.8 There is no significant difference between youth and middle aged people in the area of psychological factors of defence awareness.
- 3.9 There is no significant difference between youth and middle aged people in the area of enmity factors of defence awareness.
- 3.10 There is no significant difference between youth and middle aged people in the area of effects of war of defence awareness.
- 3.11 There is no significant difference between adult and middle aged people in the area of national security of defence awareness.
- 3.12 There is no significant difference between adult and middle aged people in the area of military service of defence awareness.
- 3.13 There is no significant difference between adult and middle aged people in the area of psychological factors of defence awareness.
- 3.14 There is no significant difference between adult and middle aged people in the area of enmity factors of defence awareness.
- 3.15 There is no significant difference between adults and middle aged people in the area of effects of war of defence awareness.

4. There is no significant difference in defence awareness of the people of different educational levels.

This hypothesis assumes that educational level does not affect significantly the defence awareness. We have selected in the present study the undergraduate and the graduate levels of education to explore the influence of education on the extent of defence awareness.

The defence awareness is manifested in five ways and directions. Hence, the researcher has divided this null hypothesis into 15 sub-hypotheses on the basis of five areas of defence awareness.

- 4.1 There is no significant difference between an undergraduate and a graduate in the area of national security of defence awareness.
- 4.2 There is no significant difference between an undergraduate and a graduate in the area of military service of defence awareness.
- 4.3 There is no significant difference between an undergraduate and a graduate in the area of psychological factors of defence awareness.
- 4.4 There is no significant difference between an undergraduate and a graduate in the area of enmity factors of defence awareness.
- 4.5 There is no significant difference between a undergraduate and a graduate in the area of effects of war of defence awareness.

Methodology

Variables of the Study

The problem was analysed in terms of independent and dependent variables. Four

independent variables have been taken for study in the present investigation. The first independent variable is residence (urban-rural) of the people. The second independent variable is caste which is studied at three levels; i.e. Kshatriya, Brahmin, and Scheduled Caste. The third independent variable is age of the person varied at three levels, i.e. youth (13-20 years), adult (21-35 years) and middle age (36-45 years). The last variable is the educational level of the people. It possess two levels, i.e. undergraduate and graduate. Defence awareness is dependent variable.

Sample

In all 750 literate people of age range 13-45 years belonging to urban and rural area of Pithoragarh district constituted the sample of the present study. Subjects were selected from District Headquarter and its tahsils and adjacent villages on an availability plus purpose basis because randomized sampling was difficult due to the hill terrain of the district.

Tools

Due to inability of any suitable tool, the researcher himself constructed a tool known as Gupta's National Defence Awareness Questionnaire (GNDAQ). Its reliability and validity were ascertained. Data were collected according to the plan chalked out in advance.

Data Analysis

The collected data were analysed keeping in view the purpose of study. Each purpose of the study was taken up one by one and the analysis of data was done accordingly. The purposes concerned with significance differences were tested with 'C.R.test'. The results arrived at are given as follows:

Findings

1. There is no significant difference in total defence awareness of urban and rural people.
2. The urban and rural people do not differ significantly in two areas (national security and psychological factors) of defence awareness.
3. But urban and rural people do differ significantly in other three areas, military services, enmity factors, and effects of war of defence awareness.
4. The Kshatriya and Brahmin differ significantly from each other regarding their total defence awareness.
5. There are significant differences between Kshatriya and Brahmin in all five areas (national security, military services, psychological factors, enmity factors, and effects of war) of defence awareness.

6. The Kshatriya and Scheduled caste differ significantly with each other regarding their total defence awareness.
7. The Kshatriya and Scheduled caste do not differ significantly in the area of national security of defence awareness.
8. While Kshatriya and Scheduled caste differ significantly in the rest of four areas (military services, psychological factors, enmity factors, and effects of war) of defence awareness.
9. The Brahmin and Scheduled caste do not differ significantly with each other regarding their total defence awareness.
10. There are no significant differences between Brahmin and Scheduled Caste in four areas (national security, military service, enmity factors, and effects of war) of defence awareness.
11. There is significant difference between the Brahmin and Scheduled caste in the area of psychological factors of defence awareness.
12. There is no significant difference in total defence awareness of the youth and adult.
13. The youth and adults do not differ significantly in four areas (national security, military service, psychological factors, and enmity factors) of defence awareness.
14. The youth and adult differ significantly in the area of effects of war of defence awareness.
15. The youth and middle-aged persons differ significantly with each other regarding their total defence awareness.
16. There are significant differences in youth and middle-aged person in four areas (national security, psychological factors, enmity factors, and effects of war) of defence awareness.
17. There is no significant difference in youth and middle-aged person in the area of military service of defence awareness.
18. There is significant difference in total defence awareness of the adult and middle-aged persons.
19. The adult and middle-aged persons do not differ significantly in three areas (national security, military service, and effects of war) of defence awareness.
20. The adult and middle-aged do differ significantly in two areas (psychological factors and enmity factors) of defence awareness.
21. The undergraduate and graduate differ significantly with each other regarding their total defence awareness.
22. There are no significant differences between the undergraduate and graduate in three areas (national security, enmity factors, and effects of war) of defence awareness.
23. There are significant differences in the rest of two areas (military service and psychological factors) of defence awareness.

After analysis of data the results found thereof are not possible to be compared with other studies as no proper study has been made so far in this field in our country.

The researcher hypothesized that there are no true residential (urban/rural), caste, age and educational differences in defence awareness, but the results showed

that these assumptions are not true in most of the cases.

So far, as the total defence awareness of urban and rural people is concerned, no significant difference is found. When the area-wise defence awareness of urban and rural people is traced, no significant difference is found in the area of national security and psychological factors while significant difference is found in the areas of military service, enmity factors, and effects of war. The reason can be attributed to the locus of present investigation. Pithoragarh District is a border district of Northern India where the international boundaries of two neighbouring countries, namely China and Nepal meet. The general public of this district is very much aware of national security due to the hostile attitude of China since 1962. Pithoragarh being a hilly border district does not provide sufficient job opportunities as well as agriculture to their inhabitants of both urban and rural areas. The people belonging to urban and rural areas of this district have a larger population in the armed forces. Moreover, the inhabitants of both urban and rural areas hear, learn, and converse regarding defence of country from their elders. It is the researcher's view that the above mentioned causes are the potent factors for getting significant difference in some cases and insignificant difference in other cases.

As for the total scores of defence awareness among Kshatriya, Brahmin, and Scheduled caste are concerned, the significant difference is found between Kshatriya and Brahmin on one side and Kshatriya and Scheduled caste on the other side. No significant difference is found between Brahmin and Scheduled caste. When the area-wise defence awareness among Kshatriya, Brahmin, and Scheduled caste are traced, significant difference is found in most of cases while insignificant difference in few cases. The reason can be attributed to the traditions of Indian caste system where each caste was assigned a definite work.

A significant difference is found in case of youth v. middle aged person and adult v. middle-aged person while insignificant difference is found in caste, youth, and adult. When the area-wise defence awareness among the youth, adult, and middle-aged persons are traced, significant difference is found in some cases while insignificant in others. The reason can be attributed to the impact of growth in age and maturity in thinking of the person which influence the feeling of defence awareness in a significant way.

The fourth and the last part of the discussion is related to the effect of educational level of the people. As far as the total defence awareness of the undergraduate and graduate is concerned, a significant difference is found; when the area-wise defence awareness of undergraduate and graduate is traced, no significant difference is found in the area of national security, enmity factors, and effects of war while significant difference is found in the area of military service and psychological factors. The reason can be attributed to the psychological background of the higher education in which as the person achieves more education, his aspirations are increased. The problem of unemployment also influences the trends of result in this area of defence awareness. Besides this, the advancement in the education of a person brings maturity in thinking which also influences the feeling of defence awareness in a significant way.

VASANT D. BHAT: A STUDY OF THE EFFECT OF SIMULATION ON PERFORMANCE OF TEACHER TRAINEES IN EDUCATIONAL PSYCHOLOGY, M.S. University, 1983, *Supervisor*: M.M. Shah.

The Problem

Instructional efforts by the institutions of teacher education consists of teaching the theoretical foundations of education and exposing the students to practical situations through practice lessons. In the absence of proper linkage between these two efforts, the former tends to gradually fade out of the instructional practices of the trained teachers. In other words, application of theoretical knowledge should receive greater attention in training programs instead of memorizing of theoretical facts.

Methodology

Thus, development of the instructional strategies and studying their individual as well as comparative effectiveness were the three objectives of the study. Simulation, whose effect on performance were to be studied, was used as an experimental instructional input in the study to provide practical situations for application of theoretical knowledge. In an instructional programme simulation sequentially follows a given instructional input for imparting theoretical knowledge. Taking self-instructional (programmed learning) and teacher instructional (structured lecture) modes as basic modes of presentation of theory, an attempt was also made to study the interaction between simulation and these basic modes of presentation in affecting performance. Four instructional strategies for teaching the course educational psychology were developed whose components are as follows.

- Strategy I: Structured Lecture + Library Reading + Discussion + Assignment
- Strategy II: Structured Lecture + Library Reading + Discussion + Assignment + Simulation
- Strategy III: Programmed Learning + Library Reading + Discussion + Assignment + Simulation
- Strategy IV: Programmed Learning + Library Reading + Discussion + Assignment

Having matched the teacher trainees on intelligence, attitude, risk-taking, age, reading comprehension, sex, and experience, they were arranged in four groups A, B, C, and D, for undergoing the course educational psychology through the above four strategies respectively. The sample consisted of 186 trainees of the Department of Education, M.S. University of Baroda. Three unit-criterion tests, one each after

teaching a unit through the developed strategies, a comprehensive criterion test, a risk-taking behaviour scale, and an attitude scale for measuring the trainees' attitude towards 'the role of the teacher in solving the problems of the children' all after completion of the course, were administered to measure performance. The data obtained were analysed in terms of pre- and post- mean differences for individual effectiveness and analysis of variance for comparative effectiveness.

Findings

The study revealed that, as compared to the treatment of either programmed learning or structured lecture, the combination of simulation and programmed learning lead to significant superior performance on all criterion tests, whereas, the combination of simulation and structured lecture lead to superior but not significant performance. Further, simulation when combined with programmed learning was found significantly superior to its combination with structured lecture in affecting performance. Significant gain in attitude scores was seen in groups undergoing the instructional experience of simulation. Only the combination of simulation programmed learning lead to a significant gain in risk-taking behaviour scores.

It was concluded from the study that simulation could be effectively used for teaching certain practical courses like educational psychology in teacher training. Though simulation as such made a significant effect on performance, its combination with programmed learning leads to a superior performance to its combination with structured lecture. Thus, simulation seems to be a necessary part of systematized instruction at teachers' training level.

MAHARAJ SINGH: THE ROLE OF EXTRA-UNCONDITIONED STIMULUS IN CLASSICAL CONDITIONING, University of Meerut, 1983, *Supervisor*: S. N. Rai.

The Problem

In a Pavlovian conditioning paradigm an initially neutral conditioned stimulus (CS), when paired with an unconditioned stimulus (US), attains some of the properties of the US. By virtue of these properties the conditioned stimulus begins to elicit a response which is often related to the response normally elicited by the US. The basis of the transfer of the properties from one (initially potent) stimulus to the other (initially neutral) is said to be the formation of an association or a bond, presumably between the neural representations of the two stimuli (Pavlov, 1960). So that the activation of the neural representation of one stimulus arouses another neural

activity which is appropriate to the likely occurrence of the second (e.g. Bindra, 1972; Mackintosh, 1974; Pearce and Hall, 1980). The magnitude of conditioning depends upon the rate and amount of the change in the 'associative strength' of the CS. To determine this strength, several theorists have proposed largely overlapping but slightly different theoretical models. Temporal contiguity of the CS and US, and/or the informational role of the CS (contingency) seems to be the basis of the theoretical models which describe the course of learning.

This study is aimed to find out the effect on conditioning of degrading the CS-US correlation by presenting the US-alone, the CS-alone or both these trials with the CS-US pairings. One problem with studying the correlation between events concerns the occurrence of nonevents. In a standard conditioning procedure the actual temporal correlation between the CS and US is enhanced by the addition to the experimental session of time in which nothing occurs. To many theories of conditioning this time is considered a nonevent or a context extinction trial (eg, Rescorla and Wanger, 1972). If an event such as CS, US or CS-US occurs, it is easy for the animal to mark its occurrence and for the experimenter to include it in his conceptualization of the mechanism of conditioning. On the other hand, if five minutes elapse with no event occurring how does the animal know whether this represents one nonevent or several? Does ten minutes include twice as many nonevents as five? Theorists often get around this problem by dividing the session up into CS-long chunks but why CS-long, why not US-long? In this experiment an attempt is made to skirt this problem by having the events and nonevents occur regularly and to mark their expected occurrence with a signal.

Methodology and Findings

In a series of five experiments on 200 male Sprague Dawley rats, an attempt was made to ascertain the role of extra US (US-alone) trials when presented randomly mixed with CS-US pairings. For experiment 1, 2, and 3 the duration of the trial was marked by a trial marker and a constant intertrial interval of 120 sec was used. Conditioning to the CS was assessed by both the Difference (CS-PreCS) and Ratio (CS/CS+PreCS) scores. In Experiment 1, when the CS-US correlation was degraded by the interpolation of (a) CS-alone, (b) US-alone, or (c) both these trials with CS-US pairings, conditioning to the CS, assessed by the difference scores, was found to be retarded only by the US-alone trials. However, in terms of the Ratio Scores, although all the three methods of degrading the CS-US correlation caused interference with conditioning, the magnitude of such an interference was the highest in case of the US-alone trials. This interference, as shown by Experiment 2, was found only when the US-alone trials were presented in a dense schedule and was not found when presented in a less dense schedule. Experiment 3 showed that interference in conditioning caused by the densely presented US-alone trials occurred because the trial marker stimulus provided more accurate information about the occurrence of the US as compared to the information provided by the CS and hence the marker stimulus blocked the acquisition of the CR.

In Experiment 4, even when the trial marker was removed and a variable intertrial interval (40 sec to 120 sec) was used, the US-alone produced interference in conditioning to the CS. This interference was not found when the US-alone trials were signalled by another stimulus. Experiment 5, replicated the results of Experiment 4 using two different CSs in separate groups. These results were discussed in terms of the associative and non-associative accounts of the US exposure effect.

AMALKANTO BARUA: MIND AND MENTAL FACTORS IN EARLY
BUDDHIST PSYCHOLOGY, University of Calcutta, 1983
Supervisor: Dipak Kumar Barua.

The Problem

Mind is a problematic concept and sundry attempts have already been undertaken from different viewpoints to make the concept clear. The scholar has endeavoured to solve the problem from the Buddhist point of view. This treatise deals with Mind not to show *how* it functions but to reveal *what* it is.

Methodology

The analytical method has been adopted for unfolding the true nature of Mind and its Factors. Assumptions have been made and stated clearly. Nothing was taken for granted. In some cases new interpretations of the terms have been given.

The Scope of study of Mind and Mental Factors lie in the Buddha's discussions on ethics, philosophy, and psychology preserved in the *Vinaya-pitaka*, *Sutta-pitaka*, and *Abhidhamma-pitaka*. The present thesis is based on these texts. By way of reference some related psychological terms enumerated by other Schools have been explained. But the main source of our information is the *Tipitaka* which provides us with a fair idea of Buddhist psychology.

Findings

Mind is not a material object which resides in the physical body rather it is a 'stream of consciousness', a 'flow of thought' and the body which has been considering to be the pivot of Mind is according to Early Buddhism, an aggregate of four kinds of elements born of matter.

There are four types of realms wherein Mind roams about in accordance with all merits and demerits it accumulates in the past. Again, all these types of Mind have

definite tasks to perform. In course of its journey, from lower level to the higher one it gets perfection, which according to Buddhism is the final achievement of a Moral type of Mind.

The four types of the realms are: (i) Realm belonging to the Sense; (ii) Realm belonging to the Form; (iii) Realm belonging to the Form-lessness; (iv) Transcendental realm.

Mind has been divided into four classes such as Peripheral, Sub-peripheral, Subliminal, Supraliminal. The way of Mind is a way from the surface or the peripheral to the centre or unity. The unity is nothing but uniformity. At the highest stage it cuts all relations with the mundane world.

The most important task of Buddhist Psychology is to exert its utmost to elevate Mind from the lower level to the highest one. The way of Mind is the way to its development. There are various means also methods which lead Mind to the citadel of peace and happiness. At the final stage of its development Mind enters into *Nibbana*.

Mind has in Theravada Buddhism been classified into three categories according to the levels of psycho-ethical states. They are: (i) Causal (ii) Resultant (iii) Unmoral or Inoperative. The two types of Mind such as Resultant-moral and Resultant-immoral have been combined into one, i.e. Resultant. In the *Abhidhamma-Pitaka* they are termed as *Sahetuka*, *Vipaka*, and *Kriya*.

Some types of Mind are Moral, some are Immoral, and the rest are Unmoral or Inoperative. All these types have been brought into light by way of explaining their nature and character. There are eighty-nine or one twenty-one types of Mind, of which thirty-three or forty nine fall under Causal, thirty-six or fifty-two under Resultant, and twenty under Inoperative.

Factors are the properties or qualities of Mind. Factors are the necessary ground for any type of Mind. From another point of view factors are nothing but the forms of Mind. Mental Factors are always active, their inactivity does not mean that they have lost energy. They are waiting only for appropriate occasion to be acted upon. Mental Factors rise and fall with Mind, and thereby they will be characterized by the apparent character of the Factor.

Mind however, is nothing but the ground of the Mental Factors which are in a sense physico-atoms and do function with Mind. There are fifty-two types of such Mental Factors which may be considered as adjuncts to Mind. These fifty-two types of Mental Factors may be grouped under (i) Universals, (ii) Particulars, (iii) Immorals, (iv) Universal-Moral, (v) Abstinenes (vi) Illimitables, (vii) Insight. Of these seven belong to the first group, six to the second, fourteen to the third, nineteen to the fourth, three to the fifth, two to the sixth and one to the seventh. All these types of the Mental Factors have their respective roles in the function of Mind. Mind may become moral or immoral with its association with moral and immoral Mental Factors. As for example, transparent water may very well be turned into green, red, and the like when we mix respective colours to it. The case is the same with Mind and Mental Factors.

Combination of Mental Factors

By combination we mean the conjunction of the Mental Factors with different types of Mind. The combination is necessary for the reason that through the process of combination the various activities of Mind have been enumerated. In fact, particular Mental Factor acts on Mind, and by doing so it projects a new character on Mind. The combination of Mental Factors are generally expressed in the following order: Combinations of Universals, Combinations of Particulars, Combinations of Immorals, Combinations of Morals.

The combinations of Mental Factors reveal the different types of the actions of Mind and also the various types of the functions of Mind belonging to the realms of experience.

The Mental Factors now may be discussed from the point of view of their two essential characters. In some cases particular types of Mental Factors regularly arise in some particular types of Mind and again in other cases another particular types of Mental Factors arise in another particular types of Mind irregularly. What we mean here as regular and irregular some scholars describe them as 'accidental' and 'essential'.

In fact, irregular Mental Factors are eleven and remaining forty-one are regular adjuncts to Mind. The most important fact which should be noted here is that the very term 'synthesis' carries with it the elements of dialectical process.

JYOTI K. PARIKH: STUDY OF NON-NORMAL CHILDREN IN RELATION TO HOME ENVIRONMENT AND SPECIAL CARE PROGRAMMES, M. S. University, 1978, *Supervisor*: B. K. Passi.

The Problem

The term non-normal in this study has been used in place of mental retardation. These children are non-normal in terms of delay in normal growth of physical, socio-emotional, intellectual, and communication skills.

Objectives

1. To study the possibilities of developing skills in the subjects residing in residential institution of non-normals. To study skills in terms of physical, socio-emotional, intellectual, and communicative.
2. To study home environment of the subjects.
3. To develop curriculum for the small group of institutionalized subjects

(non-normals). The curriculum will include total programme offered to the group.

4. To develop case studies of the subjects.

Methodology

The pilot study in terms of preliminary trial was conducted for development of sound research plan. It was conducted in two parts : (1) Study of subjects' home environment and (ii) the development of the programme (treatment). The data about home visits were collected through home visits.

The study of home environment revealed that home has a great influence on the child. In most of the case studies, it was indicated that more the anxiety in parents, more the child either cared or rejected. It was found that child's behaviour in the institution is the reflection of home environment. Thus, it was concluded that knowledge about home environment was necessary to understand the factors responsible for the child's behaviour. The second part of the study revealed that experiences related to pre-school programme were found useful in improving skills in children.

Based on the results of the pilot study, a suitable curriculum to be used with the non-normal children in the final study was developed. Final study was designed based on the following guidelines obtained through pilot study:

1. The sample size had to be restricted to ten children as these children are likely to be handicapped on physical, socio-emotional, intellectual, and communicative skills.
2. A residential institution should be selected to conduct the experiment for the final study.
3. It is necessary to conduct an experiment for longer period as these children take longer time to learn.
4. Individual treatment is necessary to prepare the group for learning.
5. Home visits are essential to obtain first hand information about home environment of the children.
6. Group treatment should be based on recreational group experiences.

Development of the Curriculum.

The curriculum development in the study aimed at developing overall development of a child. It was formulated with a purpose of providing individual and group treatment to facilitate maximum participation in the group. Seventy activities were identified. Activity analysis was done with the help of four experts and preliminary tryout was done in another institution. Final list of fifty activities was prepared under the guidance of experts in the related field. Three factors were considered significant while developing curriculum. They were : (i) what to accomplish, (ii) The sequence of programme, and (iii) approach media, aids, etc. A few changes in the activities were made according to the needs of the group identified during the programme.

Sample: A total ten children of two categories namely : (i) trainable and (ii) educable

were selected in the study.

Tools: The tools measuring the overall development of a child in various dimensions—physical, social, emotional, intellectual, and communication—were not available in the market. Hence, following four tools were prepared for the present study. : (i) interview Guide: This tool was prepared to collect data from the parents of the subjects. (ii) Periodical Development Evaluation (PDE): This tool measured the expected skill in the subjects. The skill prepared in the area of physical, social, emotional, intellectual, and communicative skills. (iii) Case observation Records (COR): The tool was prepared to collect the data on the dimension mentioned above, for studying the learning process and the activities suitable to the group. (iv) Institutional Observational Schedule (IOS) : This tool aimed to collect the background information about the institution and the subject.

Treatment: The developed curriculum was implemented to the sample for a period of twenty weeks.

Collection of Data: Both quantitative and qualitative data were collected. The quantitative data were obtained through the tools PDE and COR. The qualitative data were obtained through COR, IOS, and interview guide for the parents.

Analysis of Data: The data were analysed both quantitatively and qualitatively:

Quantitative Analysis: Simple statistical techniques like mean, SD, and analysis of variance were used to study the overall development of subjects on account of the programme offered to the group.

Qualitative Analysis: An intensive case study was developed to understand and examine the behaviour of individual subjects within the treatment period.

Findings

Dimension I-Physical Skills

The physical development indicated significant improvement in gross motor and finer muscular skills. The weekly and periodical evaluation data indicated significant gain at .01 level in the development of physical skills. The possible reasons for the success of physical skills may be due to : (i) individual attention, (ii) provision of simple and complicated play experiences, and (iii) the use of aids during implementation of programme.

Dimension II-Emotional Skills

The emotional development consists of three aspects of emotions, (i) independence in work, (ii) behavioural characteristics, and (iii) expression of emotions in terms of response towards adults, subjects, and activities. The results of weekly and

periodical evaluation revealed significant improvement in the subjects. This may be on account of (i) case study approach, (ii) provision of expressive activities, and (iii) supportive approach.

Dimension III-Social Skills.

The social skills included two aspects, namely (i) adjustment and (ii) socialization skills. Periodical and weekly evaluation of social skills revealed significant improvement. (0.01 level) in the subjects. The attributing factors towards positive change in the subjects are likely to be (i) provision of recreational experiences, (ii) structured group programme, and (iii) integrated experiences offered to the group.

Dimension IV-Speech and Communication Skills

The result of this dimension revealed significant gain (0.01 level) in weekly and periodical evaluation. It was felt that case study approach and overall programme provided maximum opportunity for verbal interaction to the group.

Dimension V-Mental Skills

This dimension consisted of (i) concept formation and (ii) general awareness. The results obtained in weekly and periodical observation revealed significant gain (0.01 level) in the subjects. The possible reasons attributed towards the achievement of these skills may be (i) readiness of the group to learn, (ii) learning through direct experiences, (iii) intellectual capacity in the subjects, and (iv) reinforcement of learning.

The Home Environment: The Parents

The information about the parents' interest in child indicated genuine concern in helping him to make his life happy. This was expressed by showing readiness to discuss with teachers regularly, paying visit to the child, and providing him better training if available in another institution. The interest of the parents also throws light on their expectations from the child. It indicated that they were unaware about the degree of disability in their child and expected from him beyond his capacity.

Public Administration

KUTUMBA RAO, M : MANAGEMENT OF CENTRAL COOPERATIVE BANKS - A CASE STUDY OF KRISHNA DISTRICT, University of Andhra, 1983, *Supervisor*: G. Parthasarathy and R.M. Mohana Rao.

The Problem

KNOWLEDGE OF the prevailing pattern and operational efficiency of management is vital for the efforts to strengthen the management of a crucial institution like a central bank. This study aims at throwing light on these aspects of management of central banks.

Objectives

The major objectives of the study are:

1. to analyse the organizational structure of the selected central banks;
2. to examine the performance of the managements of central banks in relation to the objectives and tasks set for them;
3. to study the nature of functional linkages between central banks and primary societies; and
4. to assess the effectiveness of the elected Board *vis-a-vis* the nominated Board in the light of evidence emerging from the present study.

Methodology

As the study of management performance of the banks involves an onerous task of

close and careful examination of the *modus operandi* of various activities and their end results, this study is limited to the two central banks functioning in the Krishna District, Andhra Pradesh. The major considerations in choosing the district is that one of the banks in the district has an elected Board and the other bank has a nominated Board for a long time.

The period of study is 8 years (1971-72 to 1978-79). The pattern of leadership and the availability of the data at bank level and the important policy developments influencing the operations of the banks since seventies are the prominent considerations in the selection of the period.

The management performance is evaluated in terms of the objectives and task set for the banks and the role envisaged for the management. Data schedules are used for collection of primary data from the varied sources at bank level. Interviews are also held, with the help of schedules prepared for the purpose with the leaders as well as the important functionaries in banks to assess their role in various operations of banks and to know the factors influencing the performance of the banks. Personal observation of records and loan applications of sample societies and reports of sample supervisors is another technique used for qualitative assessment of the operational performance of the banks. Indicators are used for evaluating the performance in respect of financing of societies, mobilization of deposits, recovery of loans, financial and personnel management.

Findings

The organizational structures of central bank designed several years ago, when the banks were serving largely the agricultural credit needs of the societies by and large continued to remain the same without adequately responding to the growth and diversification of activities of banks and societies. While the reorganization of the structure of executive management of the banks has been in the process, that of the structure of the Boards has yet to be initiated.

As policy making is peripheral, the role of the management of a bank is by and large limited to the implementation of the policies and procedures suggested by the RBI and the State Government. However, the management has limited options to exercise in their implementation. Its failure in judicious exercise of these options makes the management inefficient. Not always, these powers are judiciously exercised in banks, particularly in the bank with nominated official Board. It is evident from a number of issues examined that the policies and procedures of the RBI are conducive to promote the operational efficiency of the banks. These include financing of small farmers, linking of borrowings with deposits, financial discipline, and personnel matters. Most of the positive features of operational performance of banks are a sequel to the initiative of and monitoring by the RBI.

A study of the nature of supervision and control over the member societies by banks makes it obvious that a central bank prefers persuasive methods to statutory methods in disciplining members, though they are vested with many statutory

powers. Their federal and cooperative character creates delicate situations, especially in enforcing penal measures, for the banks in disciplining the members. This however does not render the bank with elected Board less efficient in its operations.

It is often pointed out that the democratic set-up of a cooperative affects the efficiency, as a result of soft-peddalling of the rigorous policies and procedures and the unwarranted interference of the leadership. However, the findings of the study do not endorse this view.

In several cases (for example fixation of scales of finance, relaxations in important loaning procedures, recovery from recalcitrant and chronic defaulters, branch expansion) the bank having elected Board has fared better as compared to the other bank with nominated official board. It may, therefore, be said that the democratic set-up of a cooperative is not incompatible with its efficiency and bureaucratic leadership is no substitute for ineffective elected leadership in cooperatives. The bureaucratic leadership with roots outside the organization, susceptibility to frequent transfers, and target minded approach do not contribute to efficient management of cooperatives.

ER. S. M. KHISTY: MANAGEMENT IN CENTRAL PUBLIC WORKS DEPARTMENT: A CRITICAL STUDY, University of Nagpur, 1983, Supervisor: V.S. Murti.

The problem

The objective of this study has been to examine the personnel management in the Central Public Works Department, to suggest not only ways and means to provide an efficient service to the user departments but also to restructure its organization, which could carry out its functions efficiently, and economically, in the larger interests of the community. To achieve this objective the Central Public Works Department should build up an efficient personnel management system, with an adequate organizational structure with appropriate career prospects which would afford job-satisfaction, and contentment to its staff. Any approach to efficiency has to consider the positive relationship between morale, motivation and feelings of justice on the one hand, and work organization and performance on the other.

Methodology

The author's association with the Central P.W.D. as a Civil Engineer from 7 June 1963, to this day has given him the opportunity to observe things at first hand.

The scholar being a Civil Engineer in the Public Works Department the

observational method has been the dominant method used in this research study. Informal interviews in order to draw and check on the experience and ideas of others for the purpose of supplementing his own observations were also taken. The author has placed substantial reliance on the study, analysis, and evaluation of the observations and findings of the various committees appointed for the Central Public Works Department. He has also relied on secondary material, viz. references like Central P.W.D. Manuals, Standing Orders/Service Rules, disciplinary procedure, delegation of power circulars issued from time to time to govern the relations/conduct of the employees.

The study has been made from the behavioural science angle, taking the Central Public Works Department as a socio-technical system, set in a larger politico-socio-economic background of the country.

Findings

1. *Recruitment*: The Department adopts a closed-doors recruitment policy which does not afford equal opportunities to all the deserving persons irrespective of their 'birth marks'. In every case half the vacancies have been recommended to be filled in by the Departmental Promotion Committee to provide an ample opportunity to the most deserving amongst seniors and yet provision has been made for those who are comparatively junior but very competent to qualify for the next higher grade. Half the number of vacancies have been earmarked for these persons who can come up through a competitive examination on method II type test being practised in the U.K. Civil Service.

There is a provision of long running scale which touches most of the grades for those persons who are not able to make the grade for the higher positions but are competent enough to earn their annual increments on the basis of their seniority and efficiency.

The closed doors of the elitist service of the Direct Recruits Class I have been thrown wide open to all competent persons who despite being 'non-competition wallahs' can be admitted to this cadre by virtue of their proved performance.

2. *Training*: There is no expert Committee of academicians and the Director General of Works to take care of the identification of the training needs and post-training utilization of the specialist work force of the Department.

The Training Institute of the Central Public Works Department has been recommended to be put in-charge of an Academician who will have the independence to propose more severe changes. The Training Institute of the Central P.W.D. is presently under the charge of an Engineer who has his roots in the larger system which has merely donated his services for a limited period of time to the Training Institute. He is more conscious as to how difficult it is to negotiate for change within the system and may not have the courage to recommend such measures. The Academician, in contrast, has no such inhibitions.

The recommendation of establishing a rapport between the Department and the Universities brings fresh thinking and enables the Department to forge mutually

advantageous collaboration arrangements.

The training scheme has been so devised that it develops the future professional talent and to train them to become adaptable and to acquire a wider range of skills.

3. *Promotion*: The recommendations regarding discontinuation of separate categorization of non-selection posts, which has tended to perpetuate the evils of elitism, is in conformity with the tenets of the 'Welfare State philosophy' which our country is wedded to. An officer who is promoted to a particular cadre should be governed by the same rules and service conditions which are applicable to that cadre.

The recommendations regarding a time bound personnel promotion scheme, bring incentive to one and all. There is also a provision for giving a higher position and emoluments on the basis of the recommendations of a Departmental Promotion Committee even if there are no such higher posts available.

4. *Employer-Employee Relations*: Formation of a separate Departmental council for the Central Public Works Department makes the grievance mechanism effective and powerful. recommendations regarding fixing responsibility in connection with the delay in non-implementation of decisions made in the various fora of the Joint Consultative machinery take care of the traditional 'casual approach' of the official side towards the J.C.M. deliberations.

5. (i) *Economy*: Creation of a cell for work study to evolve rational norms of staff requirement saves the organization from being made 'top heavy'

The strengthening of internal technical audit units ensures quality control and exercises 'preventive vigilance'. The engineers are rid of the fear psychosis of the Chief Technical Organization of the Home Ministry.

- (ii) *Personnel Needs and Man Power Planning*: Creation of a Central Personnel Unit with a Man Power Planning Cell forming a part of it under the charge of experts undertakes a wide range of man power planning exercises which aim to improve the efficient organization of work.
- (iii) *Coordination between Headquarters and Field*: A Committee of field Superintending Engineers ensures coordination between the Headquarters and the Field Units. Compilation of man power data in respect of human resources of the Department ensures that the posts are efficiently matched to achieve the greatest measure of internal coordination.
- (iv) *Generalist-Specialist Problem*: An organizational innovation by having a Board type of set up for the Central P.W.D. with the top specialist of this Department as a Chairman solves the problem of the generalist dominated Secretariat of the Ministry of Works and Housing exercising control over the Central P.W.D. even in matters that involve technical appreciation.

The interchangeability of designations of the generalists and specialists ensuring common cadre, equal pay and occupation on seniority solves this controversy once and for all. The specialists can carve out their own career paths without even the need of occupying the generalist positions now.

All India Service of Engineers: The main bottlenecks for the introduction of the service namely generalist - specialist controversy and the evils of elitism in the Central P.W.D. are removed in view of the earlier recommendations. This elite service of I.S.E. can now be constituted and fulfill its major tasks of achieving national integration and making available the services of the 'cream of Engineers' for the nation building activities.

Half the vacancies of I.S.E. have been assigned to the promotion quota for the Central and State Engineering Services to overcome the evils of elitism creeping into this All India Service.

Introduction of the method of Personnel Information Record System will be used for the construction of staff transfer lists, identification of training needs and for monitoring of man power indicators to measure the match or mismatch between the individual and his job. The method ensures maximum career development of the specialists and guiding high fliers through suitable career paths.

Publicity: The organization of the Public Relations Cell manned by experts in the field improves the image of the Department, maintains a mutual understanding between the client departments and the Central P.W.D. and keeps a close watch on the possible causes of disharmony.

Finance and Personnel: The creation of a work study cell ensures the evolution of finance - personnel equations. The system of minimum construction programme for the Department helps to keep this equation in balance at the time of slump in construction activity. Giving powers to the proposed Board of Central Public Works to take up the works of other Bodies at a percentage which is less than the approved percentage of the Departmental charges fixed for the year keeps the staff side of the equation balanced by utilizing the staff to its maximum capacity.

ASHOKE BIJAPURKAR: EFFECTIVENESS OF THE PUBLIC DISTRIBUTION CHANNEL — THE CASE OF CONTROLLED CLOTH DISTRIBUTION, Institute of Management, 1979.

The Problem

The study was aimed at determining whether, in the light of the changing nature

of products proposed to be distributed to the economically weaker sections of the population the public distribution channel, as it is organized today, would face any difficulty in distributing these products. In pursuit of this objective, answers to the following questions were sought:

1. What is the public distribution system and what is the role of the channel in the system?
2. What are the functions that must be performed by the channel in order to effectively distribute these products?
3. How well are these functions being performed presently?
4. In the light of the answers to the above, how effective is the channel as a vehicle for distributing these products?

Since controlled cloth approximates the nature of the new products (in that it is a non-commodity item) proposed to be distributed, answers to the above questions were sought through studying and evaluating the performance of the public distribution channel in distributing controlled cloth.

A public distribution system was defined as a system, created through government intervention, with the objective of making available essential commodities at fixed prices to the economically weaker sections, who, without the existence of such a system, would be unable to meet their minimum requirements of such commodities. It was postulated that the system comprised five sub-systems, viz. a production sub-system, a pricing sub-system, procurement sub-system, a distribution sub-system, and a supervisory sub-system, and the absence of anyone of these sub-systems would mean that the system was not a public distribution system.

Methodology

In the context of the changing role of the channel because of the changing nature of the products proposed to be distributed, it was postulated that the channel must perform functions in addition to merely making the product available to the target beneficiaries at the specified prices. The additional functions identified were (i) the channel must ensure a regularity of product flow, (ii) the stocking policy of the channel must ensure adequacy of range and depth, (iii) the channel must ensure that the product is brought to the attention of the target beneficiaries at the point of sale to the extent necessary for its sales and (iv) the channel must obtain feedback information and relay this to either the policy makers or the producers or both. Measures for evaluating the performance of the channel for each of these functions plus the functions of availability and selling at the fixed price were developed.

The focus of evaluation was from the target beneficiaries' point of view, so, 426 respondents from thirty-seven areas/villages in advanced as well as backward districts of Gujarat were interviewed. In addition, forty wholesalers and 110 retailers

(34 fair price shops, forty-two cooperatives and thirty-four mills' outlets) were also interviewed.

Findings

The findings of the study indicate that in spite of the fact that the channels are increasingly proposed to be used for distributing non-standard, non-commodity products, when called upon to do so they continue to view their role as one of merely making the product available at the specific prices.

In order for the channel to be effective, there is a need to improve its reach and coverage. This, in itself, will to some extent help meet the objectives of public distribution.

Increase in reach and coverage will by itself be inadequate, unless the channel members are trained in the art of merchandizing, salesmanship and sales promotion.

There is a need to rationalize the variety-wise margins such that both fast moving and slow moving items are pushed by the channel.

Unless a systematic feedback system between the target beneficiaries and either the policy makers or the producers is established, the effectiveness of the channel as well as the public distribution system itself will be severely limited. The methodology adopted for the study provides guidelines about the nature of the system and the content of the feedback required.

There is need to actively involve the national and state level nominees in the public distribution of essential commodities. Unless they function as marketing organizations, rather than indenting agents, with responsibilities of planning, analysing, coordinating and monitoring the distribution, the effectiveness of the channel will continue to be limited.

RAVINDRA KUMAR PATHIK: 'PRESSURE STRATEGY IN DISTRICT ADMINISTRATION WITH SPECIAL REFERENCE TO T.W.D. DISTRICT RAISEN, 1979 AND BEFORE, University of Bhopal, 1984.

The Problem

The study deals with the outward pressure brought down on the administrator at the district level.

Methodology

Observation and participant observations were mainly adopted in this study. The

Scholar himself was the District Officer of the district under study. The records of his own office and of the office of the Collector are used with due permission. Facts discussed and magnified in the books, are supported with the note-sheets of the office, corresponding family conditions of the clerks concerned, recommendatory letters of politicians, etc.

Findings

In the beginning some hypotheses were formed the following of which were proved.

Any rule whether it is flexible or rigid, its implementation does not depend upon the nature and language of the rule or enactment itself but it depends upon the bio-socio-psycho structure of the executor of the rule or law.

Appointing, transferring and controlling, powers are practically used by the political leaders, directors, secretaries and ministers whereas in principle these powers are delegated to the district officers. The duty of appointing district officers is only to dispatch such orders under his seal and signature which have already been issued on phone or on note-sheet by the superior officials and leaders.

Transfers made on administrative grounds, are actually made under the undue influence of impressive MLAs, Parliamentary secretaries, ministers, and by getting illicit revenue by the competent authority.

Even periodical increments can be stopped or sanctioned on the ground of casteism.

That a beneficiary has to spend Rs.50 to get prepared his case for subsidy and loan. It takes months to get it sanctioned, and the beneficiary has to pay further an amount of rupees 200 or 20 per cent of the total loan sanctioned and 50 per cent of the subsidy granted. Only those farmers who could spend such amount or who have strong political backing can get the benefit of loans and subsidy schemes of the state Government.

In spite of the law enacted sufficient evidences are there that where legal aid was provided to the weaker section of the society it could only be given in such a manner that the advocate related to the minister may get sufficient remuneration.

In executive departments it may not be a condition for officer to be intelligent but he must be faithful and obedient to his political masters.

In tours no public work is promoted in spite of spending huge amount from public funds.

M. TUKARAM: MANAGEMENT OF WATER SUPPLY IN THE CITIES OF HYDERABAD AND BANGALORE - A COMPARATIVE STUDY, Osmania University, 1982, *Supervisor: S.P. Rangarao*.

The Problem

Man's water needs have increased tremendously in the last few years. It is true that experts all over the world are worried about the supply of drinking water to future generations. Sometimes it is feared that mankind will find itself without water. Even in advanced civilizations like the British the problem is assuming alarming proportions. During the recent past Britain had faced severe drought and the authorities have also been planning the import of water from other countries.

In India several of the towns and cities are also facing a similar situation. With the spread of urbanization and especially in sprawling cities water management has become increasingly important in town planning and in the organization of human environment. Indian cities do have water supply arrangements of different patterns, but their unprecedented growth during the recent past has thrown the water supply plans prepared in the past completely out of gear. The cities of Hyderabad and Bangalore may be cited as classic examples in this regard.

Objectives

The objectives of the study were:

1. To examine the various aspects of water-supply management within the municipal limits of Hyderabad and Bangalore on a comparative basis.
2. To determine the significant differences and similarities in their functioning so as to make out a scientific analysis of the problem in depth.
3. To assess the administrative performance under both the systems as a possible factor in determining the quality of service rendered to the consumers.
4. To determine citizen satisfaction on water supply management in both the cities.
5. In particular the study aims at testing hypotheses such as the following.

Hypotheses

1. There is a crisis developing in both the cities on account of improper planning.
2. The water-tariff is unreasonable and unjust.
3. The citizens do not get water in adequate quantities when they badly require it during the day.
4. The system of meter reading and tariff collection needs improvement.

5. The morale of the employees working for water supply organizations needs a boost.

Methodology

The empirical study is chiefly based on the records and files of water supply organizations. Interview schedules have been used to interview the officials of the organizations to draw upon their personal experiences which cannot find a place in the files. Field visits have been undertaken to the Filter-Beds both under the Hyderabad and Bangalore Water Supply systems for the purpose of understanding the process involved in the treatment of raw water. A simple random sample survey to elicit citizen opinion on water supply administration was undertaken at Hyderabad and Bangalore cities. During the field study some of the prominent citizens such as ex-corporators, journalists, retired engineers and important individuals like the President of the Citizens' Forum of Bangalore City who have intimate knowledge of water supply were interviewed. Their opinion was recorded for the purpose of analysing the problem.

Findings

The study reveals that in spite of careful planning during the last more than fifty years the water supply organizations of both the cities are not able to supply water in adequate quantities to the citizens. Thus, while the international standard of consumption is prescribed at 40 gallons per capita daily, the Water Board of Bangalore and Hyderabad Water Works provides only 19 and 25 gallons per capita daily to the citizens respectively. This shortfall in the supply of water has its own effect on the hygienic conditions of the cities.

During the last few years both the cities have embarked on ambitious plans for the expansion of the water supply systems. But the augmentation schemes could not be completed on time, for one reason or the other. The water supply managements at both the places are aware of their future requirements and are taking steps to meet the demand of water by the turn of the century. In spite of considerable vigilance whenever the drought conditions prevail in both the States, crises develop in the water supply system due to acute shortage of water.

Some structural adjustments in the administrative machinery of both the States may be made in the interests of efficiency. Thus, it would be fruitful to club the functions of rural as well as urban water supply and place them under the charge of a separate minister. The study further reveals that the Board type of management has several advantages over the departmental administration. In fact, the Government of Andhra Pradesh is also contemplating to introduce such a type of management. As a step in that direction, comprehensive legislation governing water supply to the city of Hyderabad may be taken up immediately.

There is considerable waste of water through public taps in both the cities and steps may be taken urgently to avoid wastage of this commodity. Due to the worn-out pipes and the lay-out of the distribution system at present there is considerable scope for pollution of water. Hence, the remodelling undertaken in both the cities should be urgently completed to avoid the same.

At present there is no sound personnel policy in Hyderabad as well as Bangalore with the result the morale of the employees is very low. The system of work-charged employment under both the systems should be given up immediately as was done in Tamil Nadu. In fact, measures were initiated in Andhra Pradesh to abolish this category of employees.

In spite of the fact that both the water supply systems produce 60 MCD of water each, the Bangalore Water Board was making profit, while the Water Works Department Hyderabad was found to be incurring losses. The study revealed various causes for this state of affairs. Further, a citizen survey conducted in both the cities revealed that the people of Bangalore were more satisfied with water supply administration than the citizens of Hyderabad. This was mainly due to the fact that the water pressure in the pipe lines is constantly maintained in Bangalore compared to Hyderabad. Further, in matters such as the fixing of meters, repairs of meters and the payment of water charges, the procedures followed in Bangalore are found to be more convenient to the citizens.

DAVID ANTHONY, INTO: THE MAYOR, THE COMMISSIONER, AND THE METROPOLITAN ADMINISTRATION, (BOMBAY), University of Bombay, 1983, *Supervisor*: S.P. Aiyer.

The Problem

Most municipal administrations are not equipped to meet the challenges of the modern city. In several large cities of the world the growth of the population and the scale of civic services have outrun the capacity of the existing administrative structures. This is specially true of most of the Indian cities, including Bombay which has grown phenomenally over the past 300 years. It is not surprising therefore that the structure, functions, and areas of local authority are under constant review. civic administration is a matter of political debate in and out of legislature.

The Bombay Municipal Corporation as it exists today took shape under the Act of 1888 and for a great part of this period it played a key role in the development of Bombay. In the past 30 years, however, Bombay and its sprawling suburbs have experienced a transformation which would have been beyond the wildest dreams, of the man who helped shape Bombay's civic history. There has now been a demand that the structure of the Bombay Municipal Corporation should be changed giving more powers to the people's representatives.

In this thesis an attempt has been made to study the relationship between the Mayor and the Commissioner, the role of party politics in the Corporation and examine the need for any structural change.

Methodology

For the historical portions material was collected mainly from the libraries in Bombay and Delhi; some information was collected on visits to cities in Britain, made possible by a British Council Fellowship. And, through questionnaires administered to Councilors, former Mayors, former Commissioners and senior officers, leaders of major political parties through personal interviews and finally the information was gathered through personal experience in civic administration.

Findings

The Act of 1988 almost completely abrogated government control on civic affairs as it existed earlier. Though appointed by the Government, the Commissioner was removable by the Corporation. The fiscal autonomy of the Corporation was fully recognized to the satisfaction of local leaders.

The Mayor is by far the most important dignitary in any municipal set-up, whether he has any executive powers or not. At no stage in the entire history of Bombay did the Mayor have any executive powers. Despite the absence of executive powers, some of the incumbents of this office in Bombay have been very effective both in the formulation of policies and their implementation.

The excellent and effective performance of several Mayors in the city's history would lend support to the argument that substantial executive powers be vested in the Mayor provided, indeed, the incumbent has leadership qualities, administrative experience and political sagacity. The overriding consideration for conferment of substantive or absolute executive powers on the Mayor should be the latter's transparent concern for the public good *vis-a-vis* his personal or party interests.

The position of the Municipal Commissioner, who is presently the supreme Chief Executive in the administration, would suffer if some amount of executive power is conferred on the Mayor, specially in the light of the fact that the Municipal Commissioner is a senior member of the Indian Administrative Service, capable of looking at the problems from purely administrative and not political angle.

The history of the Bombay Municipal Corporation demonstrates that an able, tactful and popular Commissioner can manage to carry the elective bodies with him in the day to day administration. Bombay has had several Commissioners who have successfully combined administrative acumen with political wisdom. But there have also been occasions when confrontations have taken place between a tactless, aggressive and ambitious Commissioner on the one hand and the Councillors on the

other. The question of executive power has to be viewed objectively with a view to finding a proper solution. The plea to have an elected executive needs to be examined. Most of the mist around the efficacy of the present system of municipal government will be cleared if one refrains from assuming that the institution of Commissioner is necessarily opposed to a democratic framework. On the other hand, a Municipal Commissioner cannot get away with inefficient handling of municipal affairs on the plea that he did not have enough operational freedom because of the restraints imposed by the elective elements represented by the Mayor or the Statutory Committees. The successful performance of a majority of Municipal Commissioners testifies to the lack of any such inhibitive factors in the present system.

There is a danger of politics becoming a medium for personal ends. A growing number of citizens express a feeling of helplessness at the alarmingly rampant corruption in public life and administration. In this context the necessity for a code of conduct for the elected representatives is emphasized.

Frequent and unreasonable interference on the part of the Councillors in the administration has been a constant cause for complaints from some municipal officials. No system or procedure can serve its purpose if the officials are pressurized to twist and even break the rules so as to serve the pecuniary or political interests of some Councillors. Inevitably, a nexus develops between some powerful Councillors thus favoured and some municipal officials who feel emboldened to indulge in corrupt practices in dealings with non-Councillors in the sure knowledge that they (the officers) will be protected by the patron Councillors. The interference of Councillors in the routine process of administrative implementation creates a vicious circle of corruption which is hard to break. Moreover, the administration also cannot escape responsibility. Scores of officers and employees of various categories are either dismissed or suspended on corruption charges. In some cases, it was revealed that officials and Councillors even ganged up to harass the public. There have been a number of instances of municipal employees running for elective offices in the Corporation after retirement; a few have even resigned to become Councillors or mayors. Such persons obviously enjoy advantages of having been the 'insiders'.

The rampant corruption in the Municipal administration is protected by the general public apathy towards municipal affairs. In the ultimate analysis if there is maladministration in municipal affairs the citizens must themselves share the responsibility. The public must evince interest in public affairs and in this Public Relations Department of the Bombay Municipal Corporation can play a key role towards this end.

Several authorities on local self-government feel that the local institutions should be further democratized, implying thereby that the executive power which now vests with the Municipal Commissioner, should be vested in the elected representatives of the people. A question arises whether such conferment of executive power should be on one elected individual, like the Mayor for instance, or on a body of elected individuals like the Mayor-in-Council, assuming of course that an appointed Chief Executive is anachronistic to modern democratic times.

Experience has however shown that most politicians, not being professional managers, can be the cause of administrative crisis in local self-government.

The strong Mayor system obtaining in the United States is absolutely unsuitable in Indian conditions. The Mayor-in-Council system, otherwise called the Cabinet system, is a British legacy like that found in India at the state and national levels. As the cabinet system of Government, whether at the state level or the national level, cannot be said to be entirely satisfactory in its working, it is doubtful if the Mayor-in-Council pattern will do any better at the local self-government level. Change is indeed the essence of life, but change for its own sake cannot be considered a desirable reform.

Prima facie, the present system in the Bombay Municipal Corporation, which has worked fairly satisfactorily for nearly a century since the passing of the Act of 1888, does not warrant any structural change. In this context, it is significant that the Bombay Municipal Corporation is the only Corporation in the country which has not been superseded even once in its chequered history. At present, out of a total of 60 Corporations in India, as many as 38 either stand superseded, or have not been reconstituted at all. Most of the 38 municipal bodies superseded were either on the grounds of mismanagement, maladministration or because the political forces in control there were found to be 'inconvenient' to the party in power at the state level. Yet, the Bombay Municipal Corporation stands out in all its glory—a symbol of democratic values defying supersession, whether the latter is politically motivated or administratively necessary.

The uniqueness of the Bombay Municipal Corporation lies in the fact that during the past two decades, no single political party has commanded absolute majority. The 'front' politics has been very much in evidence. Alliances of parties, not ideologically identical, have held their sway over the civic affairs during the period, and indications are that no single recognized party will be able to gain a majority in the Corporation for a long time to come.

The Bombay Municipal Corporation has also stood the test of time in the face of heavy odds and handicaps of almost every description. It may be argued by legal and constitutional experts that the Government could not supersede the Corporation in the past because of the absence of provision for supersession in the Act. But the absence of legal provision alone need not have deterred the government from taking the action of supersession for, what could not be done under legal provisions could always be achieved through an Ordinance. But this has not been done in the case of Bombay Municipal Corporation, not because the government at no stage intended to take the step, but because of some intrinsic value represented by this premier local self-government institution in the country.

As compared with the management of municipal affairs elsewhere in India, the administration in Bombay has been by far the most efficient, despite some drawbacks common to all civic bodies. Financially also—and this is a great plus point—the Corporation has been stable throughout its history, and has never been dependent on the government's bounty.

By far the most important reason for the administrative stability of the

Corporation in the face of several 'crises' which could have easily thrown lesser civic bodies completely out of gear, is the healthy rapport existing between the Municipal Commissioner and the elected representatives of the people for most of the time.

Although there are no specific duties of Councillors defined in the Act, the Chief Executive has, over a period of time, progressively conceded some of his own powers to the Councillors. For instance, the Councillors in Bombay go on visits to municipal installations, private and public properties, either individually or in groups. All facilities are provided by the administration when they choose to go on such inspection visits, although such privileges are not provided for in law. Moreover, chairmen of Committees are provided with cars to be used for official purposes. They are also supplied with items of stationery, besides secretarial assistance which they are not entitled to, according to rules in force. Such an attitude of consideration and accommodation on the part of the administration has gone a long way in giving the Councillors a better standing and contributed to the smoothening of relations between the administration and the elective element.

What then is the rationale for change in the administrative structure of power relationship in the Bombay Municipal Corporation? Those who crave for a change for its own sake stress the need to transfer power from the Municipal Commissioner to an elected individual like the Mayor or a body like the Mayor-in-Council. This, despite the relative success of the office of the Municipal Commissioner in the Corporation's history. For, it cannot be denied that a Municipal Commissioner appointed by the government has shown time and again that he has no axe of his own to grind. Unlike in the case of a Commissioner appointed from the municipal cadre, the government-appointed Commissioner is less susceptible to political and other influences and pressures.

If a change is a must in view of the general progress of democratization, it will be worthwhile to consider such a transfer of executive authority only after ensuring that it will not be misused.

P.L. CHAUDHARI: POLITICS AND ADMINISTRATION OF SLUMS IN POONA CITY, University of Poona, 1983, *Supervisor*: S.N. Tawale.

The aim of the thesis is to study the social, economic, moral, political, and administrative problems of slums in general and slums in Pune City in particular. Housing has played an important role in forming the cultural history of mankind. The problem of shelter has caused anxiety in different forms all over the world. The problem of shelter has become more acute due to industrialization. The main effect of industrialization is that the manpower is measured in terms of money. Em-

ployment has become a serious problem in rural areas. Men began to migrate from rural areas to urban areas where employment was possible because of the industrialization. Naturally housing problem in urban areas became more grave. This problem of housing is the main cause of spreading of slums especially in big cities.

Analysis of the causes of slums brings us to the problems of growing population and poverty. People short of money cannot afford to have a better house in good localities. They are compelled to go in open spaces and have a hut made of cheapest things. Spread of such hutments, causes slums in big cities.

These slums created a problem of water supply, health, education, morals. It is noteworthy to find that slums give rise to political and administrative problems.

Methodology

Apart from books, on economics, sociology, Politics etc., journals and newspapers, official record, and different reports on the problem, the author has taken a sample survey of slums. He has interviewed Officers, Political Leaders and Social Workers. He has also discussed with people dwelling in slums.

Findings

The slum area has given rise to multi-dimensional problem of town planning. Priority to housing problem is not even considered. Effects on the morals of slum dwellers is never considered. This has given rise to criminality. Social problems have also become tense. Law and order have been endangered especially due to slum dwellers. Slums have created new leaders in politics. New lords of slum areas have started to rule the entire city. Outlook of industrialists to the slums is from the angle of getting cheap labour and political leaders are looking to the slums as vote banks.

Slum dwellers in Poona are mainly migrants who have come down in search of jobs from rural areas. The income levels observed however, indicate that they are not getting even Rs.100 per month, which is an extremely meagre amount. Organized efforts have, therefore, to be made to improve the conditions of the slum dwellers by the local self governments and industries and voluntary organizations.

The flow of migration could be stopped only by providing attractive income in rural areas. It is, therefore, necessary that a completely new organization has to be set-up.

The industries should also be requested to accept apprentices for getting the slum dwellers trained in different trades. An incentive may be declared to the industries for such schemes.

The study reveals that the slum dwellers do not get enough and nutritious food as it is too costly for them, and some of the slum dwellers resort to begging. Stale

food is collected through children and women and is sold to those who need it.

Crimes in slum areas could be stopped only by prohibiting the liquor shops in these areas. Children involved in criminal activities should be under the custody of a socialworker instead of sending them to the Remand Homes.

Political leaders are also observed to shelter these people since it is an easy means to get votes at large. The present administrative structure is responsible for development of this phenomenon by permitting the country-liquor shops in slum areas.

Sufficient efforts to establish rapport between non-political voluntary organizations and slum dwellers have to be made.

Educational levels of slum dwellers are low to the standard of illiteracy or up to primary levels. Therefore the Government should provide technical and commercial education to the slum dwellers.

Mostly the leaders are the landlords or the agents of the political parties and they have become an hindrance in solving the problems of slum dwellers.

It is seen that the present administrative set-up, for solving the problems is not adequate. It is, therefore, suggested the Government should consider establishing of a new portfolio for 'Slum Welfare'. This department of slum welfare may be modelled on the lines of the present department of 'Social Welfare'. This new slum welfare department will restrict to some extent the present undue interference of political leaders in slum areas.

PADMINI MURTI: SOME ASPECTS OF INCOME-TAX ADMINISTRATION, University of Bombay, 1983, *Supervisor*: S.P. Aiyer.

The Problem

Benjamin Franklin in a letter to Jean Baptiste de Roy in 1798 remarked that nothing in this world was certain except death and taxes. With the passage of almost two centuries the taxes have indeed become an increasingly important part of the fiscal apparatus of virtually every country. The twentieth century has witnessed the emergence of income-tax as an important source of revenue in several parts of the world. In India, too, the income-tax is firmly embedded in the fiscal structure and is one which holds considerable potential in the context of the economic development of the country.

The dissertation is a study of the Income-tax Department which administers the direct taxes. It examines the evolution of the administrative machinery, organization and structure of the administration, public relations function, recruitment and training of the income-tax personnel, promotion and placement policy, motivation and moral of the employees.

Methodology

A considerable part of the study is based on information obtained in the course of interviews with officials working at various levels in the hierarchy of the income-tax administration in Bombay City. In addition, field visits were made to the Central Board of Direct Taxes and its attached offices in Delhi and the National Academy of Direct Taxes in Nagpur. Officials in these organizations have helped considerably in the collection of data.

Findings

In the political circumstances of India, income-tax has been, and still remains, essentially urban-based. Policy makers have shied away from the uncomfortable decision to tax agricultural incomes with the result that large incomes from agriculture escape the tax net. Even in urban areas, the rising number of self-employed persons, as a result of rapidly changing economic development, remain outside the orbit of the tax, obviously because of inadequate accounting practices and information systems. Consequently, the income-tax is restricted to the incomes of business houses and other organizations and of those employed by them.

To meet the objectives of economic growth and reduction of inequalities the income-tax is levied on a progressive scale. The highest marginal rate of income-tax on individuals during the early 1970's was 97.5 per cent on incomes exceeding Rs. 2 lakh per annum. Although this 'confiscatory' rate of taxation has been reduced from 1975 onwards the rates of taxation are still on the high side, particularly if one takes into account the declining purchasing power of the rupee. The high income-tax structure in an economy riddled with scarcities and controls has encouraged in the growth of a strong parallel economy with disastrous effects on the national development.

The law on the subject of income-tax is voluminous, complicated and obscure. Delightfully vague in wording and obscure syntaxing have made the fiscal provisions interpretable in as many ways as there are lawyers. Frequent amendments to plug loopholes have been counter-productive for, instead of realizing more revenue, they provide fresh scope to the professional evader. Exercises at simplifying the laws have only succeeded in introducing greater complications. The remedy has proved worse than the malady.

In addition to these factors the attitude of the nation towards the tax system assumes considerable significance. The most efficient organization cannot collect taxes from the self-employed when evasion is endemic and there is little or no moral disapproval from the public. The situation is made worse by the attitude of government. While on the one hand it harps incessantly on the need to deal firmly with the evader, on the other it is this very class that government singles out for privileged treatment in the form of Voluntary disclosures and Bearer Bonds

Schemes. These then are some of the socio-economic factors that constrain and complicate the task of the tax administrator.

In the administrative history of India, income-tax represents the introduction of a tax unknown to earlier times. The widespread public hostility against the tax contributed in no small measure to government's diffidence. In the prevailing atmosphere of uncertainty little thought was given to the need for an adequate machinery for the administration of the tax. Consequently, the land revenue department shouldered the burden of administration. In 1886 government incorporated income-tax as a permanent source of revenue. Once the permanent nature of the tax was established administrative improvements were gradually effected. The land revenue department however, continued to administer the tax.

With the outbreak of World War I, elaborate changes were introduced in income-tax in line with developments in Britain. The growing complexity in the Income-tax Act drew attention to the need for a separate department with specialized staff. The Montagu Chelmsford Reforms in 1919, which incorporated income-tax as a central source of revenue hastened the arrival of the modern Income-tax Department which administers the tax today. The history of the income-tax department has been traced to show how it has increased in size, complexities, and functions in response to the exigencies of changing situations.

At the apex stands the Central Board of Direct Taxes (CBDT), a statutory authority set up under the Central Board of Revenue Act, 1963. It functions under the Department of Revenue in the Ministry of Finance. It guides, supervises and controls the administration of direct taxes throughout the country. As part of the Department of Revenue, it advises the Government on all matters related to direct taxes.

The CBDT has under its wings five Directorates. These are; (1) Directorates of Inspection Income-tax and Audit; (2) Investigation; (3) Research, Statistics, and Public Relations; (4) Directorate of Training. These Directorates assist the Board in carrying out its statutory and administrative functions. They also constitute a link between the Board with necessary information for management.

Income-tax administration is highly decentralized with powers delegated at crucial levels. It is in the field that most of the administration is carried out. At the head of a large field division commonly described as 'charge', stands the Commissioner with a wide range of functions which may almost be catalogued alphabetically. These charges are formed on the basis of the revenue potential and the quantity of work with the result there may be one or more Commissioners in each charge. The large and rapidly growing metropolitan cities have several Commissioners stationed in the same city. Under them work Inspecting Assistant Commissioners (IAC) who provide an essential link between the Commissioners and the large number of Income-tax Officers (ITO). At this point we touch the beehive of income-tax administration. The ITO is a key man for all practical purposes. It is he who is responsible for the actual assessments. At another level stands the Commissioner (Appeals) and the Appellate Assistant Commissioner (AAC) who hear appeals against orders passed by the IAC and ITO. The statutory powers exercised by the

various authorities are specified in the Act and others are based on administrative regulations.

The income-tax department has over the years realized the importance of educating the tax payer on his rights and obligations. A multi-media approach has been devised by the Directorate (Research, Statistics and Public Relations) towards achieving the purpose. The thesis highlights the various techniques employed by the income-tax department to improve its relations with the tax payer. It also seeks to explain why the department's efforts in this direction have not met with outstanding success.

Formal training in the income-tax department was instituted in 1944. For almost three decades, the initial training of directly recruited income-tax officers was the only organized training activity conducted in the department. Although training courses were conducted for newly recruited inspectors and clerical staff there was no regularity about them. It was the *Direct Taxes Enquiry Committee* (1971) and the Informal Review Team (1972) that brought to light the prevailing inadequacies in the training facilities in the Department. Both the Committees stressed the need to expand the training activities to cater to the needs of the entire department and they made a number of recommendations in this direction. The reorganization of the training activities in 1973 was substantially based on the recommendations of both these committees. The Department has since then forged ahead and organized a host of training programmes to cater to the needs at every level. There are however several weak points in the training function—low motivation of the probationary officers, lack of adequate care in selecting the participants for the in-service training courses, absence of continuous evaluation of the training programmes and lack of post-training utilization. These prevent the full potential of training from being realized.

As a constituent unit of the higher civil service the direct recruits compare their prospects with other services (especially the IAS). Whether it is with regard to promotions, designations, deputations, pay or working conditions they find themselves unfavourably placed.

The feeling among the officers that as part of the central services they belong to a "second class category" has unfortunate implications from the point of view of the morale of the service. At other levels the failure of the department to classify jobs according to the levels of responsibility has contributed in no small measure to the gnawing frustration which exists. Faced with prospects of stagnation it is not surprising that officials at all levels have organized themselves into staff associations, to advance what they consider their legitimate interests.

Over the years the tax administration has been practically overwhelmed by the complexities of work resulting from the rapid changes in the economy during the past three decades. Not merely has the work increased but income-tax has become the paradise for the lawyer and the tax consultant. It provides a field fertile for litigation. The generalists recruited for carrying out the administration in this field bristling with difficulties are often inadequate for the purpose. While the outstand-

ing ones acquire mastery with the passage of years, several carry out their work in a pedestrian manner. Lack of involvement, the frustration arising from an over emphasis on the seniority principle, the absence of adequate promotional avenues, the great quantity of routine work, all these are powerful enough to make the average income-tax official settle down to a routine job. Dynamism if it exists is evident sporadically and in fits and starts. Immense quantities of work are waiting to be done; the incompleteness of assessments and the recovery of tax arrears often running into a few lakhs indicate some of the unfortunate aspects of the income-tax administration.

Sociology

J. P. PACHAURI : A STUDY OF SOCIO-CULTURAL FACTORS AFFECTING FERTILITY IN TEHRI-GARHWAL, University of Agra, 1982, *Supervisor*: M. N. Srivastava.

The Problem

THE STUDY of differential fertility has vital significance for underdeveloped as well as developing countries, as its emergence historically precedes the overall decline. Moreover, socio-economic variables are particularly useful in fertility as they help in identification of variables which can be controlled for an effective population policy. At the underdeveloped stage of society there is either identical fertility or possibly a direct correlation between fertility and socio-economic status. Fertility among various socio-economic groups, therefore, is largely related to the degree of motivation for limiting the size of the family while it can also, to some extent, be explained by differences in physical and cultural factors. The physical factors are the incidence of illness, disabilities, incapacities, the age at widowhood and separation due to male employment. The cultural factors include customs regarding female separation after child delivery, post-natal care, abstinence during lactation and other religious taboos, besides the mean age at marriage. According to Kalpane Saini (1971) certain social factors like consanguineous marriages, selection of mates and age at marriage have also repercussions on fertility behaviour of women. Earlier in 1964 S.N. Agarwal, reported in his study that fertility performance of women is affected by a number of social and cultural factors. Keeping this in view, this study was conducted to know the social and cultural factors affecting fertility in Tehri-Garhwal.

The following are the objectives of the study: (a) to study the demographic

composition of Tehri-Garhwal and (b) to discuss and determine the fertility determinants of the women folk of the area.

Hypotheses

For the study, following hypotheses have been formulated:

1. The lower the age at marriage, the higher will be the fertility of women.
2. The higher the education of women, the fertility will be the lower.
3. Occupation of the women is directly related with the fertility.
4. Women in joint families have higher fertility than those in nuclear family.
5. Fertility is related with caste and religion.
6. The greater the mortality of children, higher will be the fertility.

Methodology

This study is based on 500 ever married women of 15 to 50 Age Group in Tehri-Garhwal district of Uttar Pradesh. A sample of 250 females from Tehri city and 250 females from Jakholi block, was drawn by adopting random sampling method. All the females were contacted for interview. However, data were collected only from 242 females of Tehri city and 243 of Jakholi block representing rural area, through structured interview schedule. Field work was carried out in the month of June 1981.

To know their social status, all the females were classified according to size of the family, age group, age at marriage, number of living children, level of education, occupation, income, and age at puberty.

Findings

Regarding the size of family of the respondents, 84.53 per cent were living in nuclear family while only 15.47 per cent were living in joint family. There were 485 married women in the age group of 15 to 50 years, who were eligible for inclusion in the fertility analysis. The highest percentage (65.37) of married women had married at the age group 15 to 18 years. 50.72 per cent respondents were illiterate and 49.28 per cent were literate. Among the literate 11.55 per cent were educated up to primary level, 15.88 per cent up to high school, 8.25 per cent up to intermediate, and remaining 13.60 per cent were up to graduate level. Occupation-wise, 31.55 per cent of the married women's husbands had agriculture as their occupation, while 51.13 per cent had service as their occupation. A large percentage (65.78) of the respondents belonged to the poor households having a total monthly income of Rs. 200 to 600 only. About one third (34.43 per cent) of the total respondents had attained puberty at the age of 15 years. The crude birth rate was 36.27 per cent in the rural area and 37.88 per cent in urban area, while in U.P. the birth rate is higher, i.e. 40.4

per cent. The general fertility rate was higher (193.41) in rural area in comparison to the 177.68 of the urban area. The sum of the age-specific-fertility rate was 1,151.19, total fertility rate was 8,755, and gross reproduction rate was 3,175.

The married women belonging to the age groups of 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, and 45-49 years have 0.72, 1.24, 1.85, 3.00, 4.07, 4.12, and 4.19 average number of live births respectively. It shows a gradual increase in the average live births corresponding to the age increase. A very significant finding is the clear positive relationship between fertility and education of the females. Illiterate females have the highest average live births (3.09) followed by those who are educated up to primary (3.00) high school (2.48), Intermediate (2.05) and graduate level (2.41). It shows the gradual decrease in the average live births corresponding to the educational achievement increase.

General fertility has been found highest in those women whose husband's occupations is business followed by those who are engaged in agriculture. The lowest fertility, however is observed in women having husbands in service. When the husbands' occupations were agriculture, service, business, and wage labour, the wives had 3.27, 2.00, 3.62 and 3.25 average number of live births respectively.

The average number of live births and crude birth rate was found higher in the joint family females in comparison to nuclear family. The general fertility rate was also found higher in joint family women than in nuclear family. It shows that in a nuclear family, women are free to take decision about children and are aware of family planning means while in a joint family women are not aware about family planning and the decision regarding reproduction of child is taken by other people of the family. Education may also be one of the factors. Fertility is found highest in Muslims and lowest among Brahmins. General fertility rate was as high as 461.53 among the Muslims and as low as 140 in the Brahmins. In between these two extremes falls the fertility of Harizan, Rajputs, and Vaish.

Female mean age at marriage has a direct significance for fertility performance. Lowest level of fertility was reported in those females married at the age of 23 years and above. On the other hand, the highest fertility rate was found in the women married at the age of 15 years and less. The women married at the age of 15 years and less, had the maximum number of live births (3.66). Among the others, those who were married in between 15-18, 18-22, and 23-26 years had 3.01, 1.98 and 1.20 average number of live births respectively. It shows the gradual decrease in the average number of live births corresponding to the increased age at marriage. The women who had lost one, two, and three children had 193.54, 266.66 and 571.42 as general fertility rate. It shows that the higher the number of deceased children in a family, higher the number of average live births and general fertility rate.

On the basis of the study it can be said that educational facilities and employment opportunities should be provided to the females so that they can increase their income. After that only their fertility rate can be controlled.

Uplifting the level of education alone will not serve as panacea for all ills of unwanted fertility. In fact, the potentially fertile females cannot adopt birth control

measures in spite of their willingness to do so. The major stumbling block in this direction is the doubtful efficacy of these measures and the not unfounded fear of the dangerous health hazards which often result owing to the lack of proper follow up measures.

D.R. SINGH: VICTIMS OF DACOIT GANGS IN THE CHAMBAL VALLEY, University of Saugar, 1979, *Supervisor*: D.P. Jatar.

The Problem

The relatively new discipline of victimology has been receiving attention after the publication of Von Hentig's book, *'The Criminal and his victim'* in the year 1948. Earlier not the crime but the criminal was the centre of interest. Later attention was turned also to the victims involved in a crime. The scholars have focused their attention on what is victimology. The personality of the victims; the relationship between the criminal and his victim; the role played by the victim; and his contribution to the perpetration of crime. In fact the victim centred research has brought several new perspectives in victimology. This apart, the researchers have paid attention to the victims' typologies and question of compensation to be paid to the victims.

This investigation has been undertaken with a view to studying the victims of dacoit gangs in the Chambal valley. The problem of dacoity in the valley has indeed been persistent for more than a century. The problem has attracted attention from various quarters, but in most of the cases, the observations and studies have been focused on the offenders and the offence.

A study of the gang dacoities in the region from the victims' angle would bring out valuable information upon the crime and its causation. The gang dacoities in the valley led to the victimization of several inhabitants and loss of lives, property and damage in variety of ways. A number of hypotheses have been examined. For the present purposes the term Chambal Valley has been restricted to the two civil districts of Bhind and Morena, of Madhya Pradesh. This territorial delimitation is partly based upon the consideration that this area has been for a long time the chief breeding and operating ground for the dacoits and dacoit gangs; and partly motivated by the consideration of manageability.

Methodology

The ideal source of information in this regard have been the victims of dacoit gangs.

In order to obtain dependable data with regard to personal questions and those involving prestigious points and also to compare the correctness of the responses of the victims, eye witnesses have also been included in the study. Besides, the opinion of police officers on the posting strength in the valley have also been included. To ensure further reliability, three sets of interview schedules for the victims, eye witnesses, and police officers have been scrutinized, evaluated in advance by five judges (criminologists, psychologists, and sociologists), have been pretested in the region and standardized.

Since the dacoity has been persistent for decades together, it has not been possible to select all the victims of the region, looking to the practical difficulties of contacting them because of their movement to other places or their deaths. The victims (184) prior to the surrender of dacoits, that is with effect from the 1st July 1971 to 30th June, 1972 have been included in the study. The sub-sample of eye witnesses (170), who have witnessed the victimization by the dacoit gangs have been selected for the study. The principal criteria for inclusion of sub-sample of police officers (31) was that they have been on the posting strength of the region. The sampling did not pose a problem because all the victims have been included for the present study.

Both preliminary and secondary data thus collected from various sources have been coded and analysed at Delhi University Computer Centre, using SPSS-G programme. The major findings of the study have been as follows in the light of the seven hypotheses set forth for examination in the light of the data.

Findings

The analysis of demographic factors (sex, age, caste, socio-economic status, place, and length of residence) brings out several relevant details. It shows that certain individuals in accordance with their demographic attributes are more likely to fall victims than others. The victimization of the inhabitants in the valley has been by the well organized gangs who are too well organized and their modus operandi too well thought out for the victims to face or to resist. This apart, the victimization by dacoit gangs, reveals the data, depends much upon the nature of relationship one has in the village/mohalla and thereby with the dacoits.

Further, the greater importance is of the situation which is characterized by specific topographical, transport and communication and administrative features which help in the process of victimization. Consequently, the offence of dacoity brings in its wake a variety of loss and damage to the victims which vary with their socio-economic background (S.E.S). Not only the S.E.S. of victims but also the motivations of the raiding gangs are an important consideration in assessing the loss or damage sustained by the victims. In this the dacoits are out for revenge, fire arms, or those who cooperated with police and for loot.

As regards compensation to the victims of dacoit gangs, material as well as non-material, in the Chambal Valley, are found to be far from being satisfactory.

Finally, it may be said that dacoits operate in the valley organized, determined, and motivated, and victimize the populace with relative impunity. Indeed, this criminal-victim relationship has been of importance. Nonetheless, the situational factors have been of greater significance for variety of reasons. Consequently the victims suffer a variety of losses. A few of them also formally or informally get compensation.

ANDAL NARAYANAN: THE IMPACT OF TELEVISION ON INDIAN FAMILIES: A CASE STUDY OF BOMBAY TELEVISION VIEWERS, University of Bombay, 1984, *Supervisor*: S.P. Mohanty.

The Problem

After the radio it has been acknowledged that television is the most powerful instrument of social change in the hands of communicators, who want to educate, inform or entertain. Since more than a decade has passed after television was introduced in Bombay, it was decided to examine the impact of this new medium on Bombay's viewers on different aspects of daily routine, children's health, attitudes of the viewers etc. For this purpose five sets of hypotheses were framed as under:

1. TV viewing increases family togetherness and reduces social contacts.
2. TV viewing adversely affects children's studies, and their homework.
3. TV viewing produces eyestrain and affects health.
4. TV viewing encourages passivity in the viewers.
5. TV viewing reduces selective viewing.

Scope

Television owning households in Greater Bombay involving all levels of society, irrespective of age, income, education, sex, language, religion or any other factors has been taken as the field of enquiry. The limits of Greater Bombay excluding Thane are Dahisar on the Western side and Mulund on the Eastern side of the island. The population of Greater Bombay is roughly 8 million. The city can be broadly divided into four sectors, each having its own characteristic features. South Bombay, which included Nariman Point, Cuffe Parade, and nearby areas comprise the residential colony of the affluent class with mainly multistoreyed housing pattern of very recent origin. The Central Business District Area (CBDA) which falls between Museum and Victoria Terminus consists essentially of offices and commercial establishments, where very little residential housing is involved. The central

Bombay is the core of the city and consists of the oldest buildings with tiled roofing, and also the characteristic housing types like chawls, Bombay Improvement Trust Buildings, tenements etc. The density of population is the highest in this area. Further up it is North Bombay sector, which is not more than 20-25 years old and is really central Bombay's suburbia. It consists of middle class and upper middle class housing, of residents who are the largest users of the city's transport system in commuting to the city and back. The diversity of the various sectors and their residents helped to bring out the differential impact of television on the viewers.

Methodology

The total number of television sets in Bombay as on 1980 was 2,64,872, as per the records maintained by the Broadcast Receiver Licence Department of the Post Master General's office. Owing to constraints of time and finance it was decided to keep the sample size as 300 households which worked out to slightly more than 0.01 per cent of the total number. Since the density of TV sets was not uniform in all parts of the city it was decided to extract the weighted average for each locality attached to each accounting office of the Post and Telegraph department to total out to 300.

A list of names and addresses of TV owners was obtained from the Post and Telegraph Department. Out of this list for each zone the final list of households for the survey was selected systematically. After the first number was selected randomly, every 50th household was included in the sample for each zone. Thus the researcher had no say or choice in the inclusion or exclusion of a particular name or address, and thus it ensured randomness in the selection of addresses for the sample.

Findings

From the data collected from the respondents to the questionnaires it is clearly evident that television has to a certain extent affected the life-style of the families and changed certain household routines.

The major impact has been in the area of sociability. Television has considerably reduced going out of the homes especially during transmission time, owing to a preference to watch their favourite programmes. This preference in spending the leisure time in watching TV at home is therefore mainly at the expense of some other activities. This inclination to stay at home more and more has naturally resulted in a reduction of social contacts and an increase in family togetherness. It has also resulted in a feeling of shared experience in the family.

As far as children's studies are concerned an addiction to TV viewing has

generally resulted in a neglect of studies to a certain extent, though parental control on unbridled TV viewing and the ages of the children also are important limiting factors.

The evidence is not conclusive that TV viewing either causes eyestrain or induces tiredness in children. This is probably because the TV transmission time itself is limited to four hours and in this span the children's programmes are of very short duration. However the fact that TV keeps the children indoors in the evenings when they should normally be playing vigorously in the sun has left many viewers to believe that in the long run, the absence of exposure to sun and physical activity may affect the health of growing children.

Some viewers have reported that after they had stipulated that their children invariably finished their homework and read up their lessons before they see the TV programmes this has resulted in their getting better grades in schools.

Viewers, especially housewives and retired persons and those invalids who could not leave their homes reported that TV has reduced boredom very much. It had broadened their knowledge of men and matters, increased their awareness of events and happenings around the world. In many ways it had completely compensated for the cloistered life and added a new dimension to their living.

Male office goers who had while returning from office habits of going to clubs, card playing or going to a friend's place to gossip find it prudent to reach home directly to watch TV with family. They feel that TV is a good, clean entertainment for the entire family. Especially on Sundays TV is an inexpensive entertainment available in their own living rooms, a very economical alternative to going out for entertainment. While TV has certainly stimulated interest in some specific areas like cricket matches, quiz programmes, TV plays, etc. it has also succeeded in drying up creativity and initiative and instead encouraged passivity in its viewers. For example, more and more people like to see on TV items which they would previously go out to see in person. Some specific examples are cricket test matches, sports events in general, fashion shows, etc. whose very good close ups are available on TV.

It was also observed that viewers tended to relax and allow themselves to be exposed to TV for hours even at the expense of important household tasks like repairing kitchen gadgets, cleaning the house, etc. The most perceptible effect of television was its impact on Sunday viewers. The Sunday routine of almost all families owning TV were disturbed and rescheduled to fit into the transmission pattern of Bombay Doordarshan. Hardly any cooking was done in many houses for dinner. Instead, eatables were brought from outside in the evenings. Window shopping was reduced, visits to gardens, etc. curtailed and there was very little activity in the streets.

There was also a marked tendency to see anything offered on TV even if the programme, feature film were in a language other than the mother tongue and not very understandable either. This was not the case with the paper or magazines they bought or read or the films they went out to see where they deliberately select the material of their choice.

There was a marked disinclination by viewers to receive friends or other visitors

when they are enjoying their TV programmes with their family. Nor were they eager to go out with their families and see families and see the programmes in their friend's houses.

By and large, TV viewing has affected visiting clubs, attending meetings, going to music concerts, seeing films in the theatres, reading books in the late evenings, visiting libraries, going to temples during transmission time, attending cricket matches, seeing films in languages other than the mother tongue, going out for a walk after dinner.

Almost all the viewers were of one view that TV is educative, persuasive, and entertaining. It increased their awareness of things happening around them.

At the same time it encouraged addiction to viewing leading to spectatorism and passivity and left many household jobs undone and postponed.

Sociological implications

From the sociological context the major impact of TV as observed from the survey was that the viewers became more and more aloof or alienated from the rest of the society which consisted of TV owners and non-owners. Prior to the advent of TV there were a lot of interpersonal activities between individuals and between social groups. People used to meet in large gatherings only where one could hear a political or a religious leader addressing the audience. Now small family groups gather around the TV and hear the same person. This leads to looser ties of association, without social disintegration. Thus TV has become a competing source of authority to existing channels of influences. Social contacts become diluted and there is a tendency towards alienation.

Secondly, people reduced going out and watched TV most of their leisure time, anything that is shown on TV without any resistance. This led to passivity. There was less tendency to criticize the matter or content of any message received through TV, as compared with other media. This is because comparatively TV is a cool medium with an added advantage of projecting visuals. TV provided the viewers with a readymade fantasy material, so that the viewers made less use of their creative and imaginative abilities.

Lastly at the turn of knob entertainment, pictures or information about interesting personalities and special national events are effortlessly brought to the viewers. This becomes so satisfying that one acquires a taste for seeing things on TV than in person, resulting into a sort of spectator-ism among the viewers.

The TV viewers in Bombay are essentially a heterogeneous group. In this situation a certain amount of ignorance about the customs and manners of each other's religion is natural. And this ignorance leads to prejudices based on religious differences. In this context TV's attempt to screen programmes in different languages relating to different social, ethnic and linguistic groups has certainly helped to reduce ignorance and dilute the prejudices among them. As a result there is an increase in understanding and a genuine effort at harmony and integration. This

has largely been possible because of the specific characteristic of the medium. TV has been found to reduce selective viewing and it would appear that TV is the best medium of all to achieve this objective.

By showing different programmes based on different religious themes, TV has helped to retain the cultural values and maintain the social heritage among the younger generation, especially those who are not exposed to the traditional culture. At the same time, the traditional groups who see television are helped to accept the modern ways, ideas and life styles to a greater and greater extent. By and large, the different social groups become keenly 'aware' of the changes happening around them. This 'awareness' is the first milestone for any sociological change to occur in any society which, of course, is followed by interest, evaluation, trial, and finally adoption.

PRABIN CHANDRA DAS: HAJO: A SOCIO-CULTURAL STUDY, University of Gauhati, 1984, *Supervisor*: Praphulladatta Goswami.

The Problem

Hajo, a village situated on the north bank of Brahmaputra in the Kamrup district is one of the most interesting places in Assam. From the time of the epics and Puranas the place was known for its cultural and religious importance. This area was under the rule of various royal powers at different periods. It was the seat of political activities of three powerful royal camps of medieval Assam. They were the Koches, the Mughals, and the Ahoms. As a religious centre, the place was visited by a number of saints from time to time and many of them stayed there for a long period to accelerate their religious activities.

Under the patronage of the political rulers and association of the religious preachers there was an influx of people, belonging to various ethnic groups, to Hajo and quite a number of them settled down in here. The life and culture of these newcomers had a considerable impact on the local society on the one hand, and on the other the age and cultural heritage of the area also exercised a deep influence on the socio-cultural life of the newcomers. This process of give and take in the life of the people belonging to various ethnic groups with different world-views has added a peculiar interest to the life of Hajo people.

Hajo is a place of shrines and temples. There are a number of shrines and temples meant for the Hindus, the Buddhists, and the Muslims. Amongst these the temple of Hayagriva-Madhava, which has been claimed by the Hindus as well as the Buddhist as their own religious institution, is the most prominent and important one. Almost all the Hindu shrines and temples in the sacred-complex of Hajo have been centrally managed from this temple. As a number of rulers belonging to different

royal camps patronized the temple it has earned the honour of becoming the richest religious institution of Assam. Moreover, because of its association with more than one religious group and patron this institution bears an interesting character both in the mode of worship and management.

Hajo is said to be known to the Islamic world from 13th century A.D. But it was from the beginning of the seventeenth century A.D. that the area became more popular to the Muslims. It was by this time that a shrine called Poamecca was marked as an important centre of Islamic religion and culture. One of the remarkable characteristics of Hajo in the field of religion and culture is that both the Hindu and the Muslim rulers took a keen interest in the matter of development and management of the shrines and temples without any distinction of caste and creed. They also tried to associate people from every cross-section of the society with the sacred complex. These are the important factors to be studied which have played a significant role in the making of the socio-cultural life of a region. It is in this perspective that an attempt is made to study and analyse the history, religion, society, and culture of the area in the work.

Methodology

The study has been mainly based on field work. The scholar has followed the direct observation method and narrative method for collecting data in the field. He has personally observed many customs and practices, rites and festivals in the field. To have an idea of the things and events of the past he had to have the help of informants. He has introduced a number of persons of retentive memory, intelligence, and power of expression.

Besides collecting material from the field he has consulted a number of written works both original and secondary. The original source mainly included inscriptions, copper-plates, religious scriptures, historical literature. A number of Government records and temple records have also been consulted.

Findings

It can be said that Hajo is a meeting place of several religious and cultural streams. The assimilation of heterogeneous cultural features added a magnificent dimension to the life and society of the area. In this process of building up the socio-cultural tradition of Hajo the temple of Hayagriva-Madhava has been working as the nerve centre. The whole life and society of Hajo is mainly a temple oriented one. It is because of the nature of and the role played by this institution that the society of the area is based on a principle of co-operation and coexistence. It has not only given the local society and culture a spirit of tolerance and acceptance but also taught the people of the democratic values of life and the concept of a secular society.

SATISH KUMAR SHARMA: THE ROLE OF ARYA SAMAJ MOVEMENT IN THE UPLIFT OF UNTOUCHABLES IN THE PUNJAB, University of Panjab, 1984, *Supervisor*: P. N. Pimpley.

The Problem

This study is a structural analysis of the Arya Samaj Movement in the uplift of untouchables in the Punjab. The underlying assumption is that a social movement pertains to a conscious and organized endeavour to induce or resist social change, either partially or totally. For the purpose of this study, the structural aspect has been defined in terms of religio-cultural, economic, and political conditions contemporary to the inception of the movement. After a critical review of existing formulations, the author has concluded that the movement launched to bring in social reforms, whether intended or not, generally fail to pose a serious challenge to the existing social system.

In the context of Arya Samaj's role in relation to untouchables, the study examined the following research question: First, what were the objectives and strategies of Arya Samaj *vis-a-vis* untouchables? The primary interest here lies in an understanding and examination of social structure and historical conditions contemporary to the inception of the movement. Other questions analysed referred to the caste and class structure of Punjab, caste and class status of the leaders of the movement and the extent of involvement of the untouchables themselves in the movement. Second, the interest also lies in assessing the success the movement met with. In this context the various questions taken up for analysis are: How far the movement succeeded in changing the attitudes and practices of caste Hindus *vis-a-vis* untouchables? And to what extent the untouchables themselves saw an improvement in their status?

Methodology

To accomplish the said objectives, the study has been conducted in its historical and contemporary context. The former aspect is based on secondary sources and the latter on personal interviews with ex-untouchables (purified untouchables). The cases contacted came from the districts of Punjab, namely Hoshiarpur and Gurdaspur where the movement had been historically quite popular.

Findings

As a part of the major thrust of the study the author has traced the origins of the movement in Punjab in its structural context. A part of the study relates to caste and class origins of the movement and its ideological orientations towards the untouch-

ables. The leadership of the movement under consideration was mainly drawn from caste Hindus which supported the traditional fourfold heirarchical division of the Hindu society. But it denied the existence of untouchability in such a system. For the uplift of untouchables Arya Samaj adopted two pronged strategy. First, the greater emphasis was laid on the development of liberal outlook among the caste Hindus *vis-a-vis* untouchables. And secondly, the process of Shuddhi (Purification) of untouchables and low castes was stressed in order to raise these multitudes at par with the touchables.

The efforts of the Arya Samaj for the uplift of untouchables have been recognized and historical records lend support to this. However, there arises a need to re-examine the extent of real change brought about in the social status of untouchables by the Samaj. A serious effort has also been made to ascertain the perception of ex-untouchables as to the role of the Samaj in their uplift. The individual case histories recorded by the author led to two conclusions: One, at the individual level, that too in very rare cases, the role of the Samaj was positive. Two, at general level the situation likewise was not good. So it is maintained that the efforts of the Arya Samaj were not very successful in relation to untouchables. The movement was enforced upon the caste Hindus of Punjab because of certain historical developments. Hinduism felt threatened in the face of large-scale conversions of untouchables to other religions. The movement primarily aimed at integration of the Hindus against other religions.

PURNIMA MANE: WOMEN AT WORK: A STUDY OF WOMEN EMPLOYEES AT THE SECRETARIAT, Tata Institute of Social Sciences, 1984; Supervisor: Suma Chitnis.

The research aims at identifying both, stresses and tensions under which women function in their dual roles as earner and home-maker, as well as rewards and satisfactions they derive from their new status, as earners. The study also outlines some services and facilities needed by working women. Women working in the Secretariat of the Government of Maharashtra constitute the respondents of this study.

Methodology

The study consists of two parts. In the first, a broad picture of employment of men and women at the Secretariat is obtained, through an analysis of the administrative records of the Secretariat and data collected through a Census-type survey. The second part consists of an in-depth study of a sample (selected through the circular,

systematic sampling method) of 150 women at the Secretariat—both, married and unmarried and belonging to different levels of work.

The study is largely exploratory and descriptive in nature and does not aim at testing any hypotheses regarding the employment of women. Nevertheless, the observations were guided by certain expectations, based on readings of literature and research findings, relating to working women, the world over. Some of these are as follows:

Hypotheses

I. Differences between women and men colleagues regarding:

1. *Number of children:* Women wished to have fewer children than men.
2. *Caste affiliation:* Disparity between the representation of men and women in the employment of women was expected to be even sharper, with respect to the scheduled castes and tribes.
3. *Parental background:* Women were seen as likely to have better-educated parents than men.
4. *Upward mobility in education while in employment and at work:* Women were seen likely to have less upward mobility than men both in terms of advancing their education in the course of their employment and in terms of advancing their status within employment.

II. Differences between women at varied levels of work and/or of different marital statuses with regard to:

1. *Decision to work:* Economic need was expected to figure uppermost as a cause, both for women's initial entry into employment and their decision to continue in it; the latter was seen as likely to be even more true of Class III women, than of women working in Classes I and
2. *Work satisfaction and*
3. *Perception of discrimination towards at work:* While more women in Classes I and II were expected to report satisfaction at work than those in Class III, the former group was seen as less likely to report differences being made in the treatment of women at work.
4. *Attitude to the employment of women and*
5. *Domestic burden and interference between work and home roles:* Variations were expected between married and unmarried women, and between women at differing levels of work in the domestic burden carried, the role conflict perceived and the overall attitude to the employment of women.

Findings

The findings of the Census-type survey reveal sharp differences in the personal

status and the work-situation of the women and men respondents, with women at a disadvantage in the latter. All the expectations underlined earlier are corroborated through these data. A smaller percentage of women are married than the men; it is also seen that a majority of women have smaller families than the men, particularly those whose wives are not working. The data do not provide for explanations but one wonders if women are likely to drop out of work after marriage, and if they stay on, they prefer to have few children in view of the dual role burden.

One finds that a predominant section of the women come from 'privileged' background in that a majority come from a 'superior' background, in terms of a caste affiliation and other socio-economic factors than the men. The findings suggest that white-collar employment of women is a phenomenon that is restricted to this category and is not equally open to women from less 'privileged' homes.

The data provide some evidence of change, e.g. a large percentage of the men have working wives; several women are educationally on par (if not superior) with their husbands; at least a few men are educationally on par and at times educationally inferior to their wives. The findings speak for possibilities of alternations in the status-equation in marriage.

From the data of the Census-type survey, it is evident that the work-situation of the women respondents of the Secretariat is distinctly disadvantaged *vis-a-vis* the men—women are more likely to be confined to lower-level positions, less likely to be permanent, more likely to have worked for a short duration of service and are not being promoted as rapidly as the men. The data do not reveal whether these disadvantages arise from constraints of domestic demands or whether they are suggestive of discrimination at work between the sexes. Data from the indepth study indicate the former as being seen by the respondents as curtailing their upward mobility at work. However, data from the indepth study on the respondents' perception of images prevalent about women employees at the Secretariat suggest the possibility of negative images about women as workers, as playing a role in shaping women's situation at work.

Data from the indepth study throw light on several other issues raised by the data of the survey. We had observed in the survey that a smaller percentage of the women are married than the men; it was also noted that there is a substantial percentage of women who have remained unmarried even after they have passed the expected age of marriage for women in India. Exploring into this issue in the indepth study, one finds that on the one hand economic compulsions on the part of the family have been responsible for keeping several respondents unmarried, well past the expected age of marriage; and on the other hand economic compulsions may have compelled a small number of respondents to stay on at work after marriage, even if they are keen to quit. These findings seriously question the entire issue of employment as a key to the emancipation of women.

Several of the expectations of the researcher are not fully borne out by the data of the indepth study. For instance, though one does find that an overwhelming majority of the respondents have entered work largely for economic returns, one

notes that they come to enjoy broader 'rewards' of working over the years, i.e. a sense of independence and autonomy, greater involvement in family decision making, etc. One finds that work emerges as a meaningful avenue of self-fulfilment for some, particularly those in senior positions in Classes I and II; however, for others, many of whom are from Class III, it represents a new form of bondage. This is sharply brought out in the matter of the heavy domestic workload carried by the respondents, particularly the married among them and those in Class III and the limited assistance and encouragement they get, in the process of combining dual roles.

One observes that job satisfaction is not significantly associated with the level at which women work, as expected by us. Again, contrary to our expectations, women in senior positions are more conscious than women in Class III of discrimination made at work between the sexes and some of them deeply resent it; women in Class III do not report such discrimination and when they do, seem to look upon it, positively, in terms of preferential treatment of women, in view of their biological differences and their dual roles. The findings hint at the women in positions of power and authority, as striving for roles that stretch beyond traditional, sex-linked expectations. While this may be related to their level of awareness and their exercise of authority, it may also be related to other factors such as age and the finding that most of them, especially the unmarried carry a lighter domestic burden than women in Class III.

Interestingly, irrespective of the level at which they work and their marital status, the respondents appear ambivalent in their attitudes to the employment of women. One would have expected that a group of educated, employed women would pitch unanimously in favour of the employment of women, regardless of women's financial need, their education, their marital status and whether they are mothers of young children or not. Data indicate that though a majority look upon the employment of women favourably, a small but marked section continue to adhere to traditional notions about women's primary roles and sex-typing at work. The finding is of concern in view of the notion that education and employment are likely to usher in a new outlook on women's roles among women.

One finds the respondents adopting varied measures to contain the stress inherent in the situation and to cope with their dual role burden. However, it is clear that the support and active help of the family, particularly the parental family in the case of the married, is the crucial factor in this struggle.

Several agencies have been identified as playing an important role in facilitating women to 'step out' and earn. The thesis outlines the specific functions of each of these agencies, namely the Government, employers, workers' organizations, the community and the family. The united effort of these agencies is necessary, if women are to successfully combine dual roles, with minimal conflict and tension and enjoy the rewards and returns of working.

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